August 4, 2004
Supersedes January 30, 2004

BEFORE SUBMITTING YOUR BID

1. **Use pen and ink to complete the Bid.**

2. **Have you signed and completed the Contract Agreement, Offer & Award Forms?**

3. **As a minimum, the Bidder will submit a Bid Package consisting of the Notice to Contractors, the completed Acknowledgement of Bid Amendments & Submission of Bid Bond Validation Number form, the completed Schedule of Items, 2 copies of the completed Agreement, Offer, & Award form, a Bid Bond or Bid Guarantee, and any other Certifications or Bid Requirements listed in the Bid Book.**

4. **Have you included prices for all Bid Items? ("Zero is not considered a bid price.")**

5. **Have you included a bid guarantee? Acceptable forms are:**

   A. **Bid Bond on the Department's prescribed form for 5% of the Bid Amount. (Or forms that do not contain any significant variations from the Department's forms as solely determined by the Department.)**

   B. **Official Bank Check, Cashier's Check, Certified Check, U.S. Postal Money Order or Negotiable Certificate of Deposit in the amount stated in the Notice to Contractors.**

6. **If the written Bid is to be sent, Federal Express overnight delivery is suggested as the package is delivered directly to the DOT Headquarters Building in Augusta. Other means, such as U.S. Postal Services' Express Mail has proven not to be reliable.**

AND FOR FEDERAL AID PROJECTS

7. **Have you included your DBE Proposed Utilization Form in the proper amounts, and furnished the completed form to the Contracts section by 4:30pm on bid opening day?**

If you need further information regarding Bid preparation, call the DOT Contracts Section at (207)624-3410.

For complete specifications regarding bidding requirements, refer to Section 102 of the Maine Department of Transportation, Standard Specifications, Revision December 2002.

January 30, 2004
Supercedes February 11, 2003

NOTICE

The Maine Department of Transportation is attempting to improve the way Bid Amendments/Addendums are handled, and allow for an electronic downloading of bid packages from our website, while continuing to maintain a planholders list.

Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments, must provide an email address to Diane Barnes at the MDOT Contracts mailbox at: MDOT.contracts@maine.gov. Each bid package will require a separate request.

Additionally, interested parties will be responsible for reviewing and retrieving the Bid Amendments from our web site, and acknowledging receipt and incorporating those Bid Amendments in their bids using the Acknowledgement of Bid Amendment Form.

The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via **http://www.BIDX.com**. For information on electronic bidding contract Rebecca Pooler at **rebecca.pooler@maine.gov**.

NOTICE

For security and other reasons, all Bid Packages which are mailed, shall be provided in double (one envelope inside the other) envelopes. The *Inner Envelope* shall have the following information provided on it:

Bid Enclosed - Do Not Open
PIN:
Town:
Date of Bid Opening:
Name of Contractor with mailing address and telephone number:

In Addition to the usual address information, the *Outer Envelope* should have written or typed on it:

Double Envelope: Bid Enclosed
PIN:
Town:
Date of Bid Opening:
Name of Contractor:
This should not be much of a change for those of you who use Federal Express or similar services.

Hand-carried Bids may be in one envelope as before, and should be marked with the following infrormation:

Bid Enclosed: Do Not Open
PIN:
Town:
Name of Contractor:

STATE OF MAINE DEPARTMENT OF TRANSPORTATION

Bid Guaranty-Bid Bond Form

KNOW ALL MEN BY THESE PRESENTS THAT_____

_____, of the City/Town of _____and State of_____

as Principal, and _____as Surety, a

Corporation duly organized under the laws of the State of_____and having a usual place of

Business in _____and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of_____,for payment which Principal and Surety bind

themselves, their heirs, executers, administrators, successors and assigns, jointly and severally.

The condition of this obligation is that the Principal has submitted to the Maine Department of Transportation, hereafter Department, a certain bid, attached hereto and incorporated as a part herein, to enter into a written contract for the construction of _____

_____

_____and if the Department shall accept said bid and the Principal shall execute and deliver a contract in the form attached hereto (properly completed in accordance with said bid) and shall furnish bonds for this faithful performance of said contract, and for the payment of all persons performing labor or furnishing material in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be null and void; otherwise it shall remain in full force, and effect.

Signed and sealed this_____day of _____20_____

WITNESS:

_____

_____

_____

PRINCIPAL:

By_____

By:_____

By:_____

WITNESS

_____

_____

_____

SURETY:

By_____

By:_____

Name of Local Agency: _____

NOTICE

Bidders:

Please use the attached “Request for Information” form when faxing questions and comments concerning specific Contracts that have been Advertised for Bid. Include additional numbered pages as required.

State of Maine
Department of Transportation

REQUEST FOR INFORMATION

Date _____ Time _____

Information Requested: **PIN: _____ Town(s): _____**

Request by: _____ Phone: (_____)_____
Bid Date: _____ Fax: (_____)_____

Complete top portion of form and transmit to the number listed in the Notice to Contractors

RFI No: _____ RFI received: _____

Response:_____

Response By:_____ Date: _____

INSTRUCTIONS FOR PREPARING THE CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION PLAN

The Contractor Shall:

1. Submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan to the Contract's Engineer by 4:30 P.M. on the Bid day.

2. Extend equal opportunity to MDOT certified DBE firms (as listed in MDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Insert Contractor name, the name of the person(s) preparing the form, and that person(s) telephone and fax number.

Provide total Bid price, Federal Project Identification Number, and location of the Project work.

In the columns, name each DBE firm to be used, provide the Unit or Item cost of the Work/Product to be provided by the DBE firm, give a brief description of the Work, and the dollar value of the Work.

If no DBE firm is to be utilized, the Contractor must document the reason(s) why no DBE firms are being used. Specific supporting evidence of good faith efforts taken by Contractors to solicit DBE Bidders must be attached. This evidence, as a minimum, includes phone logs, e-mail and/or mail DBE solicitation records, and the documented results of these solicitations.

NOTICE

Disadvantaged Business Enterprise Proposed Utilization

The Apparent Low Bidder must submit the Disadvantaged Business Enterprise Proposed Utilization form by close of Business (4:30 P.M.) on Bid day.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form contains additional information that is required by USDOT.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form must be used.

A copy of the new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan and instructions for completing it are attached.

Note: Questions about DBE firms, or to obtain a printed copy of the DBE Directory, contact Equal Opportunity at (207) 624-3066.

MDOTs DBE Directory of Certified firms can also be obtained at http://www.state.me.us/mdot/humnres/o_equalo/cdwbed_h.htm

____ **Original Submission** **Page ___ of ___**

____ **Revision # _____**

MaineDOT CONTRACTOR'S DISADVANTAGED BUSINESS ENTERPRISE PROPOSED UTILIZATION FORM

Low Bidder must furnish this form to Contracts Section Bid Opening day.

Contractor: _____ Telephone: _____

Prepared by:_____ Fax: _____

BID PRICE: $_____ BID DATE: _____/_____/_____

FEDERAL PIN # _____ PROJECT LOCATION: _____

TOTAL DBE_____ % PARTICIPATION FOR THIS PROJECT

WBE•	DBE•	Firm Name	Unit/Item Cost	Unit #	Description of Work & Item Number	Actual $ Value
				Total ›		

Attach supporting evidence to the maximum participation of DBEs on this project. This is a requirement. This evidence must include name of firm(s) contacted, date contacted, and outcome of solicitation.

Equal Opportunity Use:

Form received: ___/___/___ Verified by: _____

____ Accepted ____ Rejected _____

cc: ☐ Contracts ☐ Other _____

- **WBEs are non-minority women owned firms certified by MaineDOT**
- **DBEs are male and minority owned firms certified by MaineDOT**

For a complete list of certified firms go to http://www.maine.gov/mdot

Rev. 11/03

State of Maine

VENDOR FORM

For New Vendors & for Updates on Current Vendors

Special Instructions:

PLEASE PRINT CLEARLY

Return this form to:

*** = MUST BE COMPLETED TO PROCESS**

ONLY ONE NAME/VENDOR PER FORM

New Vendor	Address Change	Multi Address	Name Change	Contact Update	ID # Change

Social Security Number*
Individual or Sole Proprietor

S

Business name in "DBA" field below.

OR

Please fill in ONE.

Federal Taxpayer ID Number*
Corporation

E

Business name in "Name" field below.

This form will affect all transactions with ALL state agencies.

NEW:* **Remit to Address:** Individual or Business Name.	**OLD:** Old number:
Name*	Name
DBA or C/O	DBA or C/O
Address*	Address
Tel #*	Tel #

	Is this the same name on your Social Security card?	Acct #	
	If not, have you told Social Security about your name change?	Provider #	

Signature*

Contact Name

Print Name or Title

Accounts Receivable Contact Name

Date* (within 3 months)

Phone # if Different or for Contact Info

Vendor Indicators: Enter Y (Yes) For All Categories Listed Below That Apply To This Vendor

Dealer:		Manufacturer:		Factory Rep:	
Jobber:		Retailer:		Commodity:	
Individual:		Partnership:		Incorporated:	
Minority:		Small Business:		In-State:	

Information on State Agency Submitting Vendor Form

State Agency* & SHS #

Contact Person Name & Title*

Telephone #*

Send to: Maine Department of Transportation/ Contracts 16 SHS, Augusta, ME 04333-0014 Attn: Pat Brown

May-04

INSTRUCTIONS FOR COMPLETING VENDOR FORM

1. **Print Clearly**
2. **All sections marked with an * must be completed for processing**
3. **Send completed form to requesting State agency OR remit to address at bottom of form.**
4. **Do NOT send by Fax. Only originals will be accepted.**

FIELDS	**INFORMATION NEEDED FOR FIELD**
Instructions	*Instructions to Vendor from Agency requesting information.*
Return to	*The location of agency where the form is to be mailed back to. If none use address at bottom of form.*
Boxes above	Please check mark all that apply to the vendor. If other, please specify. If it's a new vendor only one will apply: "New Vendor"
Social Security	Individuals, individuals "doing business as", and individuals without a Federal Taxpayer ID #. Use if not using EIN
Federal Taxpayer	Businesses or professionals providing services. (ID # needs to be use for REMITTANCE purposes.) Use if not using SSN
New	Current Information
Old	Old information (If another ID# had been used please put it next to "OLD")
Name	Individual's Name or Business Name. ONLY ONE name per a form.
DBA or C	"Doing business as" or "In Care Of"
Address	REMITTANCE ADDRESS - Street Address OR PO Box (one or the other)
Tel #	Phone Number of individual or business
Signature	Individual or authorized representative of individual or authorized representative of the business
Date	Current Date (no more than 3 months old)
Contact N	Contact person at business

Accounts Receivable Contact Name	Contact person at business for accounts receivables.
Phone #	Phone for Act Rec Contact
Vendor Indicators	Indicate all that apply for the vendor, as needed
Agency In	For Agency personnel submitting the form. Contact info incase of questions.

Office of Human Resources

Equal Opportunity

MAINE DEPARTMENT OF TRANSPORTATION

Certified Disadvantaged and Women Business Enterprise

DBE DIRECTORY - MINORITY OWNED

WBE DIRECTORY - WOMEN OWNED

WEBSITE FOR DIRECTORY CAN BE FOUND AT:
http://www.state.me.us/mdot/humnres/o_equalo/cdwbed_h.htm

It is the responsibility of the Contractor to access the DBE Directory at this site in order to have the most current listings.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
NOTICE TO CONTRACTORS

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for **Statewide Rest Area Improvements** in various towns Statewide" will be received from contractors at the Reception Desk, Maine DOT Building, Child Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on December 1, 2004, and at that time and place publicly opened and read. Bids will be accepted from contractors prequalified by the Department of Transportation for Building Construction projects. All other Bids may be rejected. **MDOT provides the option of electronic bidding. We now accept electronic bids for those bid packages posted on the bidx.com website. Electronic bids do not have to be accompanied by paper bids. Please note: the Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening. During this transition, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.**

Description: Maine Federal Aid Project No. STP-1124(200)X, PIN. 11242.00

Location: Project is located at 11 various locations as outlined in the bid documents.

Outline of Work: Construct wooden framed restroom buildings as specified, 1000 gallon polyethylene holding tanks, site work, and other incidental work.

For general information regarding Bidding and Contracting procedures, contact Scott Bickford at (207)624-3410. Our webpage at http://www.state.me.us/mdot/project/design/homepg.htm contains a copy of the schedule of items, Plan Holders List, written portions of bid amendments (not drawings), and bid results. For Project-specific information fax all questions to **Project Manager** Kent Cooper at (207)624-3431. Questions received after 12:00 noon of Monday prior to bid date will not be answered. Bidders shall not contact any other Departmental staff for clarification of Contract provisions, and the Department will not be responsible for any interpretations so obtained. Hearing impaired persons may call the Telecommunication Device for the Deaf at (207) 624-3007.

Specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine . They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207)624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Bid Book $10.00 ($13.00 by mail), payment in advance, all non-refundable.

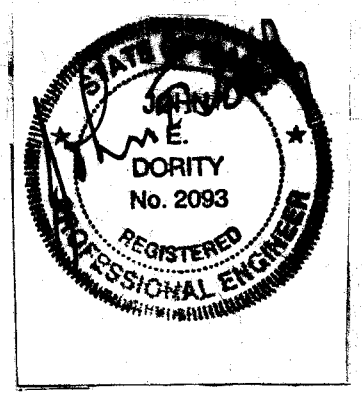
Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of $5,000.00 payable to Treasurer, State of Maine as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each in the amount of 100 percent of the Contract price, will be required of the successful Bidder.

This Contract is subject to all applicable Federal Laws. This contract is subject to compliance with the Disadvantaged Business Enterprise program requirements as set forth by the Maine Department of Transportation.

All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, Revision of December 2002", price $10 [$13 by mail], and Standard Details, Revision of December 2002, price $20 [$25 by mail] Standard Detail updates can be found at http://www.state.me.us/mdot/project/design/homepg.htm

The right is hereby reserved to the MDOT to reject any or all Bids.

Augusta, Maine
November 10, 2004



JOHN E. DORITY
CHIEF ENGINEER

Statewide
11242.00
August 3, 2004
Supercedes March 17, 2004

SPECIAL PROVISION 102.7.3
ACKNOWLEDGMENT OF BID AMENDMENTS

With this form, the Bidder acknowledges its responsibility to check for all Amendments to the Bid Package. For each Project under Advertisement, Amendments are located at http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php It is the responsibility of the Bidder to determine if there are Amendments to the Project, to download them, to incorporate them into their Bid Package, and to reference the Amendment number and the date on the form below. The Maine DOT will not post Bid Amendments any later than noon the day before Bid opening without individually notifying all the planholders.

Amendment Number	Date

The Contractor, for itself, its successors and assigns, hereby acknowledges that it has received all of the above referenced Amendments to the Bid Package.

CONTRACTOR

Date

Signature of authorized representative

(Name and Title Printed)

MAINE DEPARTMENT OF TRANSPORTATION

BID

DATE OF OPENING : **CALL ORDER :**

CONTRACT ID : 011242.00

PROJECTS

STP-1124(200)X

COUNTY : STATEWIDE

SCHEDULE OF ITEMS REVISED:

CONTRACT ID: 011242.00 PROJECT(S): STP-1124(200)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
		SECTION 0001 PRIVIES				
0010	203.24 COMMON BORROW	65.000 CY				
0020	411.131 STONE DUST SURFACE COURSE	1776.000 SF				
0030	615.07 LOAM	157.000 CY				
0040	619.1401 EROSION CONTROL MIX	157.000 CY				
0050	629.05 HAND LABOR, STRAIGHT TIME	220.000 HR				
0060	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	200.000 HR				
0070	659.10 MOBILIZATION	LUMP	LUMP			
0080	815.50 PRIVY BUILDING SITE LOC. 1 - HAYSTACK	LUMP	LUMP			
0110	815.50 PRIVY BUILDING SITE LOC. 2 - CRAWFORD	LUMP	LUMP			
0120	815.50 PRIVY BUILDING SITE LOC. 3 - E. MUSQUASH	LUMP	LUMP			

CONTRACT ID: 011242.00 PROJECT(S): STP-1124(200)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0130	815.50 PRIVY BUILDING SITE LOC. 4 - CARRY BROOK	LUMP	LUMP			
0140	815.50 PRIVY BUILDING SITE LOC. 5 - DOLBY FLOWAGE	LUMP	LUMP			
0150	815.50 PRIVY BUILDING SITE LOC. 6 - TWIN LAKES	LUMP	LUMP			
0160	815.50 PRIVY BUILDING SITE LOC. 7 - ARNOLD'S WAY	LUMP	LUMP			
0170	815.50 PRIVY BUILDING SITE LOC. 8 - ACADIA TRAIL	LUMP	LUMP			
0180	815.50 PRIVY BUILDING SITE LOC. 9 - RIVERSIDE	LUMP	LUMP			
0190	815.50 PRIVY BUILDING SITE LOC. 10 - TWIN BRIDGE	LUMP	LUMP			
0200	815.50 PRIVY BUILDING SITE LOC. 11 - WESTON	LUMP	LUMP			
	SECTION 0001 TOTAL					
	TOTAL BID					

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

_____

a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at _____

_____

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No.**11242.00** for **Statewide Rest Area Improvements** in the towns/counties **Statewide**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **June 15, 2005.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is _____

_____

$_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

PIN. 11242.00 - Statewide Rest Area Improvements,

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	_____
Date	(Signature of Legally Authorized Representative of the Contractor)
_____	_____
Witness	(Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

_____	_____
Date	By: David A. Cole, Commissioner
_____	
Witness	

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and

_____

a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at _____

_____

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No.**11242.00** for **Statewide Rest Area Improvements** in the towns/counties **Statewide**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **June 15, 2005.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is _____

_____

$_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

PIN. 11242.00 - Statewide Rest Area Improvements,

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	_____
Date	(Signature of Legally Authorized Representative of the Contractor)
_____	_____
Witness	(Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

_____	_____
Date	By: David A. Cole, Commissioner
_____	
Witness	

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and **(Name of the firm bidding the job)** a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at **(address of the firm bidding the job)**

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No. **1224.00**, for the **Hot Mix Asphalt Overlay** in the town/city of **West Eastport**, County of **Washington**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **November 15**, 2003**.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is **____(Place bid here in alphabetical form such as One Hundred and Two dollars and 10 cents)_____ $_ (repeat bid here in numerical terms, such as $102.10)_____** Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

PIN 1234.00 West Eastport, Hot Mix Asphalt Overlay,

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work on the date specified in the Engineer's "Notice to Commence Work" as stated in Section 107.2 of the Standard Specifications Revision of 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan by 4:30pm on the day of bid opening to the Contracts Engineer.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

_____	**(Sign Here)**
Date	(Signature of Legally Authorized Representative of the Contractor)
____(**Witness Sign Here)**	**(Print Name Here)**
Witness	(Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

Date	By: David A. Cole, Commissioner
(Witness)	

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____ _____ **and the State of** _____, as principal, and……..., a corporation duly organized under the laws of the State of ..... and having a usual place of business ...., as Surety, are held and firmly bound unto the Treasurer of the State of Maine in the sum of _____ **and 00/100 Dollars ($)**, to be paid said Treasurer of the State of Maine or his successors in office, for which payment well and truly to be made, Principal and Surety bind themselves, their heirs, executors and administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in the Contract to construct Project Number _____ in the Municipality of _____ promptly and faithfully performs the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the State of Maine.

Signed and sealed this ..... day of ....., 20…. .

WITNESSES:	SIGNATURES: CONTRACTOR:
Signature.....	.....….....
Print Name Legibly	Print Name Legibly ...….....
	SURETY:
Signature	....….....
Print Name Legibly	Print Name Legibly .....
SURETY ADDRESS:	NAME OF LOCAL AGENCY:
.....	ADDRESS .....
.....	..….....
.....	.....….....
TELEPHONE.....	.....….....

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____ _____ **and the State of** _____, as principal, and.....…..... a corporation duly organized under the laws of the State of ..... and having a usual place of business in .....……., as Surety, are held and firmly bound unto the Treasurer of the State of Maine for the use and benefit of claimants as herein below defined, in the sum of _____ **and 00/100 Dollars ($)** for the payment whereof Principal and Surety bind themselves, their heirs, executors and administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in the Contract to construct Project Number _____ in the Municipality of _____ promptly satisfies all claims and demands incurred for all labor and material, used or required by him in connection with the work contemplated by said Contract, and fully reimburses the obligee for all outlay and expense which the obligee may incur in making good any default of said Principal, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material or both, used or reasonably required for use in the performance of the contract.

Signed and sealed this ..... day of ...……....., 20 ... .

WITNESS:	SIGNATURES:
	CONTRACTOR:
Signature…….....	.....….....
Print Name Legibly .....…….	Print Name Legibly …....
	SURETY:
Signature.....	...….....
Print Name Legibly	Print Name Legibly …....
SURETY ADDRESS:	NAME OF LOCAL AGENCY:
...….....	ADDRESS ….....
.....	……....
TELEPHONE	……....

General Decision Number: ME030005 07/30/2004 ME5

Superseded General Decision Number: ME020005

State: Maine

Construction Types: Heavy

Counties: Aroostook, Hancock, Kennebec, Knox, Lincoln, Piscataquis, Sagadahoc, Somerset, Waldo and Washington Counties in Maine.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	06/13/2003
1	10/10/2003
2	07/30/2004

* ENGI0004-013 04/01/2004

	Rates	Fringes
Power equipment operators:		
Cranes	$ 16.51	6.70
Drillers	$ 16.51	6.70
Mechanics	$ 16.51	6.70
Oilers	$ 16.51	6.70

IRON0496-002 09/16/2003

	Rates	Fringes
Ironworker, Structural	$ 20.15	14.99

SUME2000-004 10/24/2000

	Rates	Fringes
Carpenters: (including Form Work)	$ 14.17	2.11
Electrician	$ 13.67	1.39
Ironworker, Reinforcing	$ 29.00	3.32
Laborers:		
Flaggers	$ 6.00	
Pipelayers	$ 10.79	.60
Unskilled	$ 9.80	
Power equipment operators:		
Backhoes	$ 11.89	1.15
Bulldozers	$ 11.81	1.78
Excavator	$ 13.40	3.78
Graders	$ 12.10	1.40
Loaders	$ 12.40	2.88
Pavers	$ 7.50	
Piledrivers	$ 17.25	
Rollers	$ 10.18	1.46
Truck drivers:		
Dump	$ 9.17	.76

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations

Wage and Hour Division

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

==========

END OF GENERAL DECISION

General Decision Number: ME030007 07/30/2004 ME7

Superseded General Decision Number: ME020007

State: Maine

Construction Type: Heavy

County: Penobscot County in Maine.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	06/13/2003
1	07/30/2004

* ENGI0004-014 04/01/2004

	Rates	Fringes
Power equipment operators:		
Graders	$ 16.51	6.70
Pavers	$ 16.51	6.70

SUME2000-006 10/24/2000

	Rates	Fringes
Cement Mason/Finisher	$ 12.09	.50
Laborers:		
Fence Erectors	$ 16.77	.33
Rakers	$ 13.11	2.25
Unskilled	$ 11.07	1.38
Power equipment operators:		
Backhoes	$ 14.59	3.33
Excavators	$ 12.24	.88
Loaders	$ 12.49	1.93
Rollers	$ 15.10	3.15
Truck drivers:		
Dump	$ 8.97	1.18
Tri axle	$ 10.05	.56

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations

Wage and Hour Division

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

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Wage and Hour Administrator

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

==========

END OF GENERAL DECISION

General Decision Number: ME030008 07/30/2004 ME8

Superseded General Decision Number: ME020008

State: Maine

Construction Types: Heavy

Counties: Franklin, Oxford and York Counties in Maine.

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	06/13/2003
1	09/19/2003
2	11/07/2003
3	07/30/2004

* BOIL0029-003 10/01/2003

	Rates	Fringes
Boilermaker	$ 25.46	12.72

CARP1996-003 10/01/2003

	Rates	Fringes
Carpenters:		
Carpenter	$ 18.25	8.45
Millwright, Piledriver	$ 20.25	8.45

---

* ELEC0490-002 06/01/2003

YORK COUNTY (Townships of Alfred, Lebanon, Sanford, Wells and area south thereof)

	Rates	Fringes
Electrician	$ 23.90	10.81
Teledata System Installer	$ 18.75	10.11

ELEC0567-004 06/01/2003

FRANKLIN COUNTY: Entire County excluding Carthage, Perkins Plantation, Temple Farmington, and Industry Township and are south thereof; OXFORD COUNTY; YORK COUNTY: Entire County excluding Alfred, Lebanon, Sanford and Wells Township and area south thereof

	Rates	Fringes
Electrician	$ 23.88	10.27

---

* ELEC1253-003 08/01/2003

FRANKLIN COUNTY: Townships of Carthage, Chesterville, Farmington, Industry, Jay, Perkins Pl., New Sharon, Temple, Washington Pl., Wilton

	Rates	Fringes
Electrician	$ 22.62	10.95

SUME2000-007 10/24/2000

	Rates	Fringes
Laborers:		
Landscape Laborers	$ 12.00	
Pipelayers	$ 13.98	
Unskilled	$ 10.66	5.85
Power equipment operators:		
Backhoes	$ 13.52	2.95
Bulldozers	$ 12.34	2.51
Excavators	$ 13.43	
Loader	$ 11.40	

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations

Wage and Hour Division

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

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Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

==========

END OF GENERAL DECISION

Rest Area Privy Replacement Site Notes

Region 1 Southern

Twin Bridges, Rt 117, Otisfield, Oxford County, Davis Bacon ME8
- Privy located on existing gravel pad for seasonal privy
- Finished floor at elevation of parking area
- No additional fill needed, dispose of waste soil on site
- Stabilize exposed soil with erosion control mix

Region 2 Mid-Coast

Acadia Trail, Rt 3, Searsmont, Waldo County, Davis Bacon ME5
- Privy located north of existing, some brush / small tree clearing needed
- Grade stake for finished floor
- No additional fill needed, dispose of waste soil on site
- Stabilize exposed soil with erosion control mix

Region 3 Western

Arnold's Way, Rt 201, Bingham, Somerset County, Davis Bacon ME5
- Privy located south end of rest area west of existing
- Finished floor at elevation of parking area
- No additional fill needed, remove waste from site
- Stabilize exposed soil with erosion control mix

Riverside, Rt 2, Bethel, Oxford County, Davis Bacon ME8
- Privy located south of existing, just east of existing path
- Finished floor at elevation of path
- No additional fill needed, dispose of waste soil on site
- Stabilize exposed soil with MDOT seed mix #2 and hay mulch

Region 4 Eastern

Crawford, Rt 9, Crawford, Washington County, Davis Bacon ME 5

- Privy at top of knoll in front of previous privy location
- Location and grade stake for finish floor staked on site
- No additional fill needed, dispose of waste soil on site
- Stabilize exposed soil with MDOT seed mix #2 and hay mulch

Region 5 Northern

Carry Brook, Rt 162, T16-R4, Aroostook County, Davis Bacon ME5

Privy location east of existing privy, around carry in/out sign
Grade stake for finished floor
No additional fill needed, dispose of waste soil on site
Stabilize exposed soil with MDOT seed mix #2 and hay mulch

Dolby Flowage, Rt 157, T4R7, Penobscot County, Davis Bacon ME7

Privy located on path to existing privy, approximately 9' from edge of pavement
Finished floor at elevation of pavement
No additional fill needed, dispose of waste soil on site
Stabilize exposed soil with erosion control mix

East Musquash, Rt 6, Topsfield, Washington County, Davis Bacon ME5

Privy location east end of parking area on path to existing privy by lilac bush
Finished floor at elevation of pavement
No additional fill needed, dispose of waste soil on site
Stabilize exposed soil with erosion control mix

Haystack, Rt 163, Castle Hill, Aroostook County, Davis Bacon ME5

Privy located Northwest of existing privy
Grade stake for finished floor
No additional fill needed, dispose of waste soil on site
Stabilize exposed soil with MDOT seed mix #2 and hay mulch

Twin Lakes, Rt 11, T4IP, Penobscot County, Davis Bacon ME7

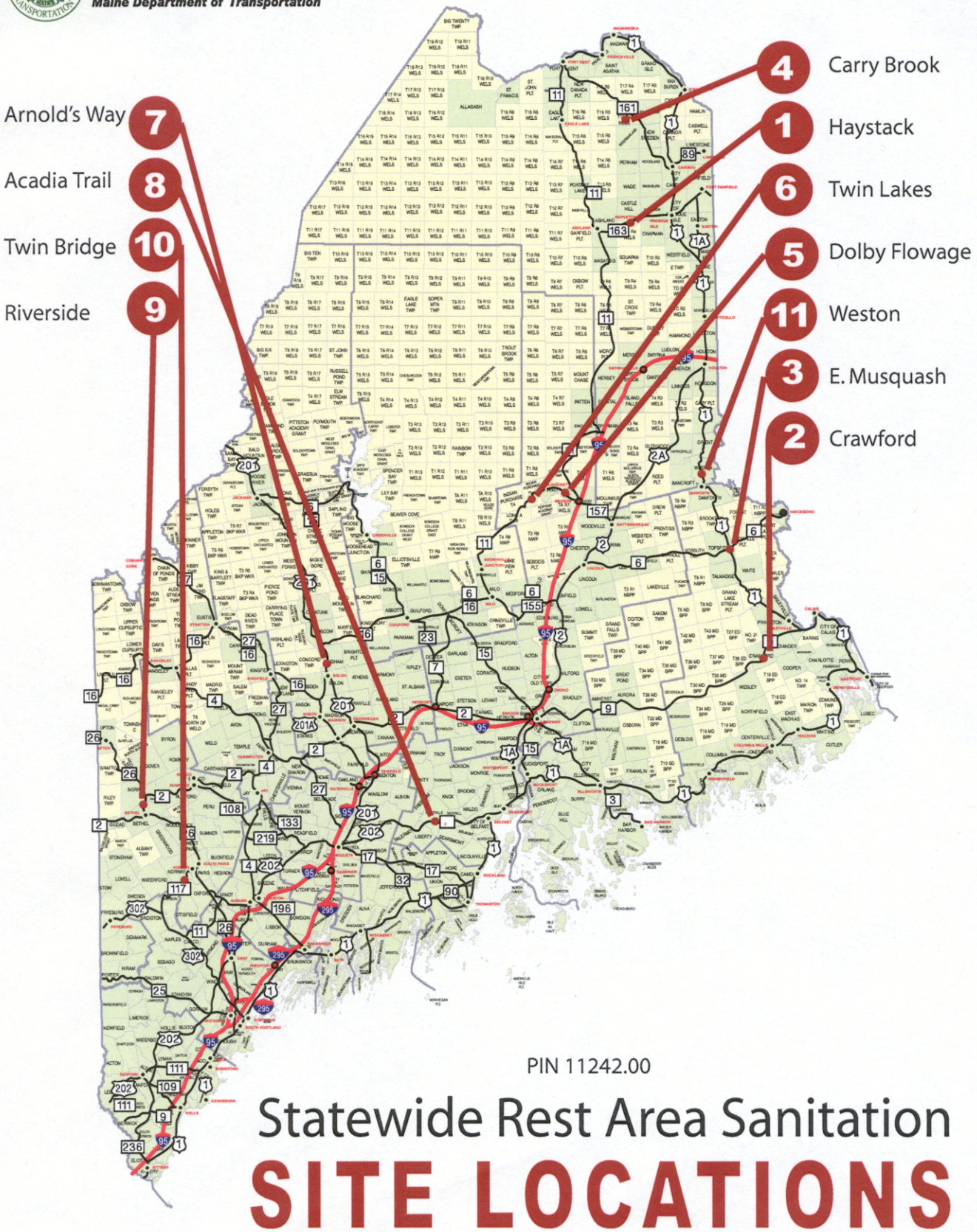
Privy located on west side of rest area
Grade stake for finished floor, -4" parking elevation
Additional fill will be needed
Stabilize exposed soil with MDOT seed mix #2 and hay mulch

Weston, Rt 1, Weston, Aroostook County Davis Bacon ME5

Privy location south end of parking area, behind existing guardrail.
Finished floor 3” below pavement
No additional fill needed, dispose of waste soil on site
Stabilize exposed soil with erosion control mix

* * *

MAINEDOT
Maine Department of Transportation



PIN 11242.00

Statewide Rest Area Sanitation

SITE LOCATIONS

Rest Area Privies
PIN 11242
November 10, 2004

General Notes

1. All work performed under this contract shall be governed by and conform to the Standard Specifications (Revision December 2002) and the Supplementals thereto, together with the Standard Details (Revision Dec. 2002) and the Supplementals thereto, as modified by the plans or Special Provisions.
2. Contractors will have the option of fabricating these buildings off-site for inspection and partial payment prior to on-site delivery and final installation and incidental site-work.
3. This job will be subject to Davis – Bacon Heavy Wages.
4. No utility involvement is anticipated. The contractor shall confirm the absence of utilities on all project sites prior to beginning construction. Call Dig Safe 1-800-225-4977.
5. Work will be permitted ONLY between the hours of 7:00 A.M. and 5:00 P.M. (EST).
6. No lane closures will be permitted.
7. The contractor shall not be permitted to have an on-site storage or staging area.
8. The contractor will be a Contractor pre-qualified by MDOT for Building(s) projects.
9. The contractor shall dispose of all debris in accordance with state and federal regulations.
10. This work will be scheduled with the Project Manager/MDOT Landscape Architect Kent Cooper at (207)624-3085 to provide on-site inspection as required.
11. Any damage to existing structures, guardrail, drainage ways and/or slopes caused by the contractor's equipment, personnel or operation shall be repaired to the satisfaction of the Engineer. All work, equipment and materials required to make repairs shall be at the contractor's expense.
12. On-site work will be scheduled between April 1, 2005 and all work will be completed by June 15th, 2005 subject to liquidated damages as stipulated in the contract.
13. A pre-construction meeting will be scheduled at MDOT Headquarters in Augusta after successful award of this contract.

* * *

Town: **Statewide**
Project: **11242.00**
Date: **September 9, 2004**

SPECIAL PROVISIONS
SECTION 104
Utilities

MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications **is not** required.

GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the Department for utility and/or railroad work to be undertaken in conjunction with this project.

Temporary utility adjustments are **not** anticipated.

No utility relocation or adjustment work is planned, nor is any anticipated for this project. However, there may be utilities located within the limits of the project and therefore, precautions should be taken when initiating any subsurface work.

DIG SAFE

The Contractor shall be responsible for determining the presence of underground utility facilities prior to commencing any excavation work and shall notify utilities of proposed excavation in accordance with M.R.S.A. Title 23 §3360-A, Maine "Dig Safe" System. **1-888-344-7233**

MAINTAINING UTILITY LOCATION MARKINGS

The Contractor will be responsible for maintaining the buried utility location markings following the initial locating by the appropriate utility or their designated representative.

THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.

SPECIAL PROVISION
SECTION 105
LEGAL RELATIONS WITH AND RESPONSIBILITY TO PUBLIC
(NPDES)

105.8.2 Permit Requirements This Section is revised by the addition of the following paragraph:

"The Contractor is advised that the Environmental Protection Agency has issued a final National Pollutant Discharge Elimination System (NPDES) General Permit for storm water discharges from construction sites disturbing more than 2 ha [5 acres]. This permit requires:

- Storm Water Pollution Prevention Plan
- Submission of a Notification of Intent (NOI) at least 48 hours before construction commences
- Submission of a Notification of Termination (NOT) when a site has been finally stabilized and all storm water discharges from construction activities are eliminated.

If the project's land disturbances is 2 ha [5 acres] or more, the Department will prepare the plan and submit the NOI (and NOT). The Contractor shall prepare plans and submit NOI's (and NOT's) for regulated construction activities beyond the project limits (e.g., borrow pits).

The Contractor shall be familiar with and comply with these regulations."

Statewide
PIN 11242.00
Nov. 8, 2004

SPECIAL PROVISION
SECTION 107
TIME
(Limitation of Operations)
and
(Supplemental Liquidated Damages)

Once the Contractor commences on-site work on this project the work shall be continuous through completion.

If the Contractor does not have prior written authorization from the Resident to suspend work, the Contractor shall be assessed supplemental liquidated damages at the rate of Two Hundred ($200.00) Dollars per day for each calendar day that work is not performed on the project.

For the purpose of this Special Provision suspension of work is defined as there being less than 70 percent of the normal work force required to perform the activities that were scheduled for that period. The Resident shall provide the sole decision as to whether the work has been suspended.

This assessment of supplemental liquidated damages will be in addition to the liquidated damages specified in Section 107 of the Standard Specifications, Rev. 2002.

Rest Area Privies
PIN 11242
November 10, 2004

SPECIAL PROVISION
Section 107

TIME
(Contract Time)

On-site work on this project will not begin before**:** **April 1, 2005**

The specified contract completion date for which all work shall be completed is**:** **June 15, 2005**

* * *

SPECIAL PROVISION
(Consolidated Special Provisions)

SPECIAL PROVISION SECTION 101
CONTRACT INTERPRETATION

101.2 Definitions - Closeout Documentation

Replace the sentence "A letter stating the amount….. DBE goals." with "DBE Goal Attainment Verification Form"

SPECIAL PROVISION SECTION 102
DELIVERY OF BIDS
(Location and Time)

102.7.1 Location and Time Add the following sentence "As a minimum, the Bidder will submit a Bid Package consisting of the Notice to Contractors, the completed Acknowledgement of Bid Amendments & Submission of Bid Bond Validation Number form, the completed Schedule of Items, 2 copies of the completed Agreement, Offer, & Award form, a Bid Bond or Bid Guarantee, and any other Certifications or Bid Requirements listed in the Bid Book."

SPECIAL PROVISION SECTION 103
AWARD AND CONTRACTING

103.3.1 Notice and Information Gathering Change the first paragraph to read as follows: "After Bid Opening and as a condition for Award of a Contract, the Department may require an Apparent Successful Bidder to demonstrate to the Department's satisfaction that the Bidder is responsible and qualified to perform the Work."

SPECIAL PROVISION SECTION 104
GENERAL RIGHTS AND RESPONSIBILITIES

Delete the entire Section 104.5.9 and replace with the following:

104.5.9 Landscape Subcontractors The Contractor shall retain only Landscape Subcontractors that are certified by the Department's Environmental Office Landscape Unit.

SPECIAL PROVISION SECTION 105
GENERAL SCOPE OF WORK

Delete the entire Section 105.6 and replace with the following:

105.6.1 Department Provided Services The Department will provide the Contractor with the description and coordinates of vertical and horizontal control points, set by the Department, within the Project Limits, for full construction Projects and other Projects where survey control is necessary. For Projects of 1,500 feet in length, or less: The Department will provide three points. For Projects between 1,500 and 5,000 feet in length: The Department will provide one set of two points at each end of the Project. For Projects in excess of 5,000 feet in length, the Department will provide one set of two points at each end of the Project, plus one additional set of two points for each mile of Project length. For non-full construction Projects and other Projects where survey control is not necessary, the Department will not set any control points and, therefore, will not provide description and coordinates of any control points. Upon request of the Contractor, the Department will provide the Department's survey data management software and Survey Manual to the Contractor, or its survey Subcontractor, for the exclusive use on the Department's Projects.

105.6.2 Contractor Provided Services Utilizing the survey information and points provided by the Department, described in Subsection 105.6.1, Department Provided Services, the Contractor shall provide all additional survey layout necessary to complete the Work. This may include, but not be limited to, reestablishing all points provided by the Department, establishing additional control points, running axis lines, providing layout and maintenance of all other lines, grades, or points, and survey quality control to ensure conformance with the Contract. The Contractor is also responsible for providing construction centerline, or close reference points, for all Utility Facilities relocations and adjustments as necessary to complete the Work. When the Work is to connect with existing Structures, the Contractor shall verify all dimensions before proceeding with the Work. The Contractor shall employ or retain competent engineering and/or surveying personnel to fulfill these responsibilities.

The Contractor must notify the Department of any errors or inconsistencies regarding the data and layout provided by the Department as provided by Section 104.3.3 - Duty to Notify Department If Ambiguities Discovered.

105.6.2.1 Survey Quality Control The Contractor is responsible for all construction survey quality control. Construction survey quality control is generally defined as, first, performing initial field survey layout of the Work and, second, performing an independent check of the initial layout using independent survey data to assure the accuracy of the initial layout; additional iterations of checks may be required if significant discrepancies are discovered in this process. Construction survey layout quality control also requires written documentation of the layout

process such that the process can be followed and repeated, if necessary, by an independent survey crew.

105.6.3 Survey Quality Assurance It is the Department's prerogative to perform construction survey quality assurance. Construction survey quality assurance may, or may not, be performed by the Department. Construction survey quality assurance is generally defined as an independent check of the construction survey quality control. The construction survey quality assurance process may involve physically checking the Contractor's construction survey layout using independent survey data, or may simply involve reviewing the construction survey quality control written documentation. If the Department elects to physically check the Contractor's survey layout, the Contractor's designated surveyor may be required to be present. The Department will provide a minimum notice of 48 hours to the Contractor, whenever possible, if the Contractor's designated surveyor's presence is required. Any errors discovered through the quality assurance process shall be corrected by the Contractor, at no additional cost to the Department.

105.6.4 Boundary Markers The Contractor shall preserve and protect from damage all monuments or other points that mark the boundaries of the Right-of-Way or abutting parcels that are outside the area hat must be disturbed to perform the Work. The Contractor indemnifies and holds harmless the Department from all claims to reestablish the former location of all such monuments or points including claims arising from 14 MRSA § 7554-A. For a related provision, see Section 104.3.11 - Responsibility for Property of Others.

SPECIAL PROVISION SECTION 106
QUALITY

106.6 Acceptance Add the following to paragraph 1 of A: "This includes Sections 401 - Hot Mix Asphalt, 402 - Pavement Smoothness, and 502 - Structural Concrete - Method A - Air Content."

Add the following to the beginning of paragraph 3 of A: "For pay factors based on Quality Level Analysis, and"

SPECIAL PROVISION SECTION 107
TIME

107.3.1 General Add the following: "If a Holiday occurs on a Sunday, the following Monday shall be considered a Holiday. Sunday or Holiday work must be approved by the Department, except that the Contractor may work on Martin Luther King Day, President's Day, Patriot's Day, the Friday after Thanksgiving, and Columbus Day without the Department's approval."

107.7.2 Schedule of Liquidated Damages Replace the table of Liquidated Damages with the following:

From More Than	Up to and Including	Amount of Liquidated Damages per Calendar Day
$0	$100,000	$100
$100,000	$300,000	$200
$300,000	$500,000	$400
$500,000	$1,000,000	$575
$1,000,000	$2,000,000	$750
$2,000,000	$4,000,000	$900
$4,000,000	and more	$1,875

SPECIAL PROVISION SECTION 108
PAYMENT

108.4 Payment for Materials Obtained and Stored First paragraph, second sentence, delete the words "…Delivered on or near the Work site at acceptable storage places."

SPECIAL PROVISION SECTION 109
CHANGES

109.1.1 Changes Permitted Add the following to the end of the paragraph: "There will be no adjustment to Contract Time due to an increase or decrease in quantities, compared to those estimated, except as addressed through Contract Modification(s)."

109.1.2 Substantial Changes to Major Items Add the following to the end of the paragraph: "Contract Time adjustments may be made for substantial changes to Major Items when the change affects the Critical Path, as determined by the Department"

109.4.4 Investigation / Adjustment In the third sentence, delete the words "subsections (A) - (E)"

109.5.1 Definitions - Types of Delays

B. Compensable Delay Replace (1) with the following; "a weather related Uncontrollable Event of such an unusually severe nature that a Federal Emergency Disaster is declared. The Contractor will only be entitled to an Equitable Adjustment if the Project falls within the geographic boundaries prescribed under the disaster declaration."

109.7.2 Basis of Payment Replace with the following: "Equitable Adjustments will be established by mutual Agreement for compensable items listed in Section 109.7.3-

Compensable Items, based upon Unit or Lump Sum Prices. If Agreement cannot be reached, the Contractor shall accept payment on a Force Account basis as provided in Section 109.7.5 - Force Account Work, as full and complete compensation for all Work relating to the Equitable Adjustment."

109.7.3 Compensable Items Replace with the following: "The Contractor is entitled to compensation for the following items, with respect to agreed upon Unit or Lump Sum Prices:

1. Labor expenses for non-salaried Workers and salaried foremen.

2. Costs for Materials.

3. A markup on the totals of Items 1 and 2 of this subsection 109.7.3 for home office overhead and profit of the Contractor, its Subcontractors and suppliers, and any lower tier Subcontractors or suppliers, with no mark-ups on mark-ups.

4. Cost for Equipment, based on Blue Book Rates or leased rates, as set forth in Section 109.7.5(C), or the Contractor's Actual Costs.

5. Costs for extended job-site overhead.

6. Time.

7. Subcontractor quoted Work, as set forth below in Section 109.7.5 (F)."

109.7.5 Force Account Work

C. Equipment

Paragraph 2, delete sentence 1 which starts; "Equipment leased…."

Paragraph 6, change sentence 2 from "The Contractor may furnish…" to read "If requested by the Department, the Contractor will produce cost data to assist the Department in the establishment of such rental rate, including all records that are relevant to the Actual Costs including rental Receipts, acquisition costs, financing documents, lease Agreements, and maintenance and operational cost records."

Add the following paragraph; "Equipment leased by the Contractor for Force Account Work and actually used on the Project will be paid for at the actual invoice amount plus 10% markup for administrative costs."

Add the following section;

"F. Subcontractor Quoted Work When accomplishing Force Account Work that utilizes Subcontractor quoted Work, the Contractor will be allowed a maximum markup of 5% for profit and overhead."

SPECIAL PROVISION SECTION 110
INDEMNIFICATION, BONDING, AND INSURANCE

Delete the entire Section 110.2.3 and replace with the following:

110.2.3 Bonding for Landscape Establishment Period The Contractor shall provide a signed, valid, and enforceable Performance, Warranty, or Maintenance Bond complying with the Contract, to the Department at Final Acceptance.

The bond shall be in the full amount for all Pay Items for work pursuant to Sec 621, Landscape, payable to the "Treasurer - State of Maine," and on the Department's forms, on exact copies thereof, or on forms that do not contain any significant variations from the Department's forms as solely determined by the Department.

The Contractor shall pay all premiums and take all other actions necessary to keep said bond in effect for the duration of the Landscape Establishment Period described in Special Provision 621.0036 - Establishment Period. If the Surety becomes financially insolvent, ceases to be licensed or approved to do business in the State of Maine, or stops operating in the United States, the Contractor shall file new bonds complying with this Section within 10 Days of the date the Contractor is notified or becomes aware of such change.

All Bonds shall be procured from a company organized and operating in the United States, licensed or approved to do business in the State of Maine by the State of Maine Department of Business Regulation, Bureau of Insurance, and listed on the latest Federal Department of the Treasury listing for "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies."

By issuing a bond, the Surety agrees to be bound by all terms of the Contract, including those related to payment, time for performance, quality, warranties, and the Department's self-help remedy provided in Section 112.1 - Default to the same extent as if all terms of the Contract are contained in the bond(s).

Regarding claims related to any obligations covered by the bond, the Surety shall provide, within 60 Days of Receipt of written notice thereof, full payment of the entire claim or written notice of all bases upon which it is denying or contesting payment. Failure of the Surety to provide such notice within the 60-day period constitutes the Surety's waiver of any right to

deny or contest payment and the Surety's acknowledgment that the claim is valid and undisputed.

SPECIAL PROVISION SECTION 401
HOT MIX ASPHALT PAVEMENT

401.18 Quality Control Method A & B Make the following change to paragraph a. QCP Administrator; in the final sentence, change "…certified as a Plant Technician or Paving Inspector…" to "…certified as a Quality Assurance Technologist…"

401.201 Method A Under a. Lot Size, add the following; "Each lot will be divided into a minimum of four sublots for mix properties and five sublots for percent TMD."

SPECIAL PROVISION SECTION 402
PAVEMENT SMOOTHNESS

Add the following: "Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Bituminous Box."

"402.02 Lot Size Lot size for smoothness will be 1000 lane-meters [3000 lane-feet]. A sublot will consist of 20 lane-meters [50 lane-feet]. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If greater than one-half the normal lot size, it will be tested as a separate lot."

SPECIAL PROVISION SECTION 502
STRUCTURAL CONCRETE

502.05 Composition and Proportioning; TABLE #1; NOTE #2; third sentence; Change "…alcohol based saline sealer…" to "alcohol based silane sealer…"

502.0502 Quality Assurance Method A - Rejection by Resident Change the first sentence to read: "For an individual sublot with test results failing to meet the criteria in Table #1, or if the calculated pay factor for Air Content is less than 0.80……"

502.0503 Quality Assurance Method B - Rejection by Resident Change the first sentence to read: "For material represented by a verification test with test results failing to meet the criteria in Table #1, the Department will……"

502.0505 Resolution of Disputed Acceptance Test Results Combine the second and third sentence to read: "Circumstances may arise, however, where the Department may ……"

502.10 Forms and False work

D. Removal of Forms and False work 1., First paragraph; first, second, and third sentence; replace "forms" with "forms and false work"

502.11 Placing Concrete

G. Concrete Wearing Surface and Structural Slabs on Precast Superstructures Last paragraph; third sentence; replace "The temperature of the concrete shall not exceed 24° C [75° F} at the time of placement." with "The temperature of the concrete shall not exceed 24° C [75° F} at the time the concrete is placed in its final position."

502.15 Curing Concrete First paragraph; replace the first sentence with the following; "All concrete surfaces shall be kept wet with clean, fresh water for a curing period of at least 7 days after concrete placing, with the exception of vertical surfaces as provided for in Section 501.10 (D) - Removal of Forms and False work."

Second paragraph; delete the first two sentences.

Third paragraph; delete the entire paragraph which starts "When the ambient temperature…."

Fourth paragraph; delete "approved" to now read "…continuously wet for the entire curing period…"

Fifth paragraph; second sentence; change "…as soon as it is possible to do so without damaging the concrete surface." to "…as soon as possible."

Seventh paragraph; first sentence; change "…until the end of the curing period." to "…until the end of the curing period, except as provided for in Section 502.10(D) - Removal of Forms and False work."

SPECIAL PROVISION SECTION 503
REINFORCING STEEL

503.06 Placing and Fastening Change the second paragraph, first sentence from: "All tack welding shall be done in accordance with Section 504, Structural Steel." to "All tack welding shall be done in accordance with AWS D1.4 Structural Welding Code - Reinforcing Steel."

SPECIAL PROVISION SECTION 504
STRUCTURAL STEEL

504.18 Plates for Fabricated Members Change the second paragraph, first sentence from: "…ASTM A 898/A 898 M…" to "…ASTM A 898/A 898 M or ASTM A 435/A 435 M as applicable and…"

SPECIAL PROVISION SECTION 535
PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.02 Materials Change "Steel Strand for Concrete Reinforcement" to "Steel Strand." Add the following to the beginning of the third paragraph; "Concrete shall be Class P conforming to the requirements in this section. 28 day compressive strength shall be as stated on the plans. Coarse aggregate…."

535.26 Lateral Post-Tensioning Replace the first paragraph; "A final tension…" with "Overstressing strands for setting losses cannot be accomplished for chuck to chuck lengths of 7.6 m [25 ft] and less. In such instances, refer to the Plans for all materials and methods. Otherwise, post-tensioning shall be in accordance with PCI standards and shall provide the anchorage force noted in the Plans. The applied jacking force shall be no less than 100% of the design jacking force."

SPECIAL PROVISION SECTION 603
PIPE CULVERTS AND STORM DRAINS

603.0311 Corrugated Polyethylene Pipe for Option III Replace the Minimum Mandrel Diameter Table with the following:

Nominal Size US Customary (in)	Minimum Mandrel Diameter (in)	Nominal Size Metric (mm)	Minimum Mandrel Diameter (mm)
12	11.23	300	280.73
15	14.04	375	350.91
18	16.84	450	421.09
24	22.46	600	561.45
30	28.07	750	701.81
36	33.69	900	842.18
42	39.30	1050	982.54
48	44.92	1200	1122.90

SPECIAL PROVISION SECTION 604
MANHOLES, INLETS, AND CATCH BASINS

604.02 Materials Add the following:

"Tops and Traps	712.07
Corrugated Metal Units	712.08
Catch Basin and Manhole Steps	712.09"

SPECIAL PROVISION SECTION 605
UNDERDRAINS

605.05 Underdrain Outlets Make the following change:

In the first paragraph, second sentence, delete the words "metal pipe".

SPECIAL PROVISION SECTION 606
GUARDRAIL

606.02 Materials Delete the entire paragraph which reads "The sole patented supplier of multiple mailbox…." and replace with "Acceptable multiple mailbox assemblies shall be listed on the Department's Approved Products List and shall be NCHRP 350 tested and approved."

Delete the entire paragraph which reads "Retroreflective beam guardrail delineators…." and replace with "Reflectorized sheeting for Guardrail Delineators shall meet the requirements of Section 719.01 - Reflective Sheeting. Delineators shall be fabricated from high-impact, ultraviolet and weather resistant thermoplastic.

606.09 Basis of Payment First paragraph; delete the second and third sentence in their entirety and replace with "Butterfly-type guardrail reflectorized delineators shall be mounted on all W-beam guardrail at an interval of every 10 posts [62.5 ft] on tangents sections and every 5 posts [31.25 ft] on curved sections as directed by the Resident. On divided highways, the delineators shall be yellow on the left hand side and silver/white on the right hand side. On two-way roadways, the delineators shall be silver/white on the right hand side. All delineators shall have retroreflective sheeting applied to only the traffic facing side. Reflectorized guardrail delineators will not be paid for directly, but will be considered incidental to the guardrail items."

SPECIAL PROVISION SECTION 615
LOAM

615.02 Materials Make the following change:

Organic Content	Percent by Volume
Humus	"5% - 10%", as determined by Ignition Test

SPECIAL PROVISION SECTION 618
SEEDING

618.01 Description Change the first sentence to read as follows: "This work shall consist of furnishing and applying seed ….." Also remove ",and cellulose fiber mulch" from 618.01(a).

618.03 Rates of Application In 618.03(a), remove the last sentence and replace with the following: "These rates shall apply to Seeding Method 2, 3, and Crown Vetch."

In 618.03(c) "1.8 kg [4 lb]/unit." to "1.95 kg [4 lb]/unit."

618.09 Construction Method In 618.09(a) 1, sentence two, replace "100 mm [4 in]" with "25 mm [1 in] (Method 1 areas) and 50 mm [2 in] (Method 2 areas)"

618.15 Temporary Seeding Change the Pay Unit from Unit to Kg [lb].

SPECIAL PROVISION SECTION 620
GEOTEXTILES

620.03 Placement Section (c)

Title: Replace "Non-woven" in title with "Erosion Control".
First Paragraph: Replace first word "Non-woven" with "Woven monofilament".
Second Paragraph: Replace second word "Non-woven" with "Erosion Control".

620.07 Shipment, Storage, Protection and Repair of Fabric Section (a)

Replace the third sentence with the following: "Damaged geotextiles, as identified by the Resident, shall be repaired immediately."

620.09 Basis of Payment

Pay Item 620.58: Replace "Non-woven" with "Erosion Control"
Pay Item 620.59: Replace "Non-woven" with "Erosion Control"

SPECIAL PROVISION SECTION 621
LANDSCAPING

621.0036 Establishment Period In paragraph 4 and 5, change "time of Final Acceptance" to "end of the period of establishment". In Paragraph 7, change "Final Acceptance date" to ""end

of the period of establishment" and change "date of Final Acceptance" to "end of the period of establishment".

SPECIAL PROVISION SECTION 626
HIGHWAY SIGNING

626.034 Concrete Foundations Add to the following to the end of the second paragraph: "Pre-cast and cast-in-place foundations shall be warranteed against leaning and corrosion for two years after the project is completed. If the lean is greater than 2 degrees from normal or the foundation is spalling within the first two years, the Contractor shall replace the foundation at no extra cost."

SPECIAL PROVISION SECTION 637
DUST CONTROL

637.06 Basis of Payment Add the following after the second sentence of the third paragraph: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 637 and/or the Contractor's own Soil Erosion and Pollution Control Plan concerning Dust Control and/or the Contractor's own Traffic Control Plan concerning Dust Control and/or visible evidence of excessive dust problems, as determined by the Resident, will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Additional penalties may also be assessed in accordance with Special Provision 652 - Work Zone Traffic Control and Standard Specification 656 - Temporary Soil Erosion and Water Pollution Control."

SPECIAL PROVISION SECTION 639
ENGINEERING FACILITIES

639.04 Field Offices Change the forth to last paragraph from: "The Contractor shall provide a fully functional desktop copier…" to "….desktop copier/scanner…"

SPECIAL PROVISION SECTION 652
MAINTENANCE OF TRAFFIC

652.3.5 Installation of Traffic Control Devices In the first paragraph, first sentence; change "Signs shall be erected…" to "Portable signs shall be erected…" In the third sentence; change

"Signs must be erected so that the sign face…" to "Post-mounted signs must also be erected so that the sign face…"

652.8.2 Other Items Replace the last paragraph with the following: "There will be no payment made under any 652 pay items after the expiration of the adjusted total contract time."

SPECIAL PROVISION SECTION 653
POLYSTYRENE PLASTIC INSULATION

653.05 Placing Backfill In the second sentence; change "…shall be not less than 150 mm [6 in] loose measure." to "…shall be not less than 250 mm [10 in] loose measure." In the third sentence; change "…crawler type bulldozer of not more than 390 kg/m^2 [80 lb/ft^2] ground contact pressure…" to "…crawler type bulldozer of not more than 4875 kg/m^2 [2000 lb/ft^2] ground contact pressure…"

653.06 Compaction In the last sentence; change "…crawler type bulldozer of not more than 390 kg/m^2 [80 lb/ft^2] ground contact pressure…" to "…crawler type bulldozer of not more than 4875 kg/m^2 [2000 lb/ft^2] ground contact pressure…"it]."

SPECIAL PROVISION SECTION 656
TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

656.5.1 If Pay Item 656.75 Provided Replace the second paragraph with the following: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 656 and/or the Contractor's own Soil Erosion and Pollution Control Plan will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item."

SPECIAL PROVISION SECTION 703
AGGREGATES

703.06 Aggregate for Base and Subbase Delete the first paragraph: "The material shall have…" and replace with "The material shall have a minimum degradation value of 15 as determined by Washington State DOT Test Method T113, Method of Test for Determination of Degradation Value (March 2002 version), except that the reported degradation value will be the result of testing a single specimen from that portion of a sample that passes the 12.5 mm [½ in] sieve and is retained on the 2.00 mm [No. 10] sieve, minus any reclaimed asphalt pavement used."

703.07 Aggregates for HMA Pavements Delete the forth paragraph: "The composite blend shall have…" and replace with "The composite blend, minus any reclaimed asphalt pavement used, shall have a Micro-Deval value of 18.0 or less as determined by AASHTO TP 58. In the event the material exceeds the Micro Deval limit, a Washington Degradation test shall be performed. The material shall be acceptable if it has a value of 30 or more as determined by Washington State DOT Test Method T 113, Method of Test for Determination of Degradation Value (March 2002 version) except that the reported degradation value will be the result of testing a single composite specimen from that portion of the sample that passes the 12.5mm [1/2 inch] sieve and is retained on the 2.00mm [No 10] sieve, minus any reclaimed asphalt pavement used."

703.22 Underdrain Backfill Material Change the first paragraph from "…for Underdrain Type B…" to "…for Underdrain Type B and C…"

SPECIAL PROVISION SECTION 706
NON-METALLIC PIPE

706.06 Corrugated Polyethylene Pipe for Underdrain, Option I and Option III Culvert Pipe Change the first sentence from "…300 mm diameters to 900 mm" to "…300 mm diameters to 1200 mm" Delete, in it's entirety, the last sentence which begins "This pipe and resins…" and replace with the following; "The manufacturing plants of polyethylene pipe shall be certified by the Eastern States Consortium. Polyethylene pipe shall be accepted based on third party certification by the AASHTO's National Transportation Product Evaluation Program."

SPECIAL PROVISION SECTION 709
REINFORCING STEEL AND WELDED STEEL WIRE FABIC

709.03 Steel Strand Change the second paragraph from "…shall be 12mm [½ inch] AASHTO M203M/M203 (ASTM A416/A416M)…" to "…shall be 15.24 mm [0.600 inch] diameter AASHTO M203 (ASTM A416)…"

SPECIAL PROVISION SECTION 712
MISCELLANEOUS HIGHWAY MATERIALS

Add the following:

"712.07 Tops, and Traps These metal units shall conform to the plan dimensions and to the following specification requirements for the designated materials.

Gray iron castings shall conform to the requirements of AASHTO M105, Class 30, unless otherwise designated.

Carbon steel castings shall conform to the requirements of AASHTO M103/M103M. Grade shall be 450-240 [65-35] unless otherwise designated.

Structural steel shall conform to the requirements of AASHTO M183/M183M or ASTM A283/A283M, Grade B or better. Galvanizing, where specified for these units, shall conform to the requirements of AASHTO M111.

712.08 Corrugated Metal Units The units shall conform to plan dimensions and the metal to AASHTO M36/M36M. Bituminous coating, when specified, shall conform to AASHTO M190 Type A.

712.09 Catch Basin and Manhole Steps Steps for catch basins and for manholes shall conform to ASTM C478M [ASTM C478], Section 13 for either of the following material:

(a) Aluminum steps-ASTM B221M, [ASTM B211] Alloy 6061-T6 or 6005-T5.

(b) Reinforced plastic steps Steel reinforcing bar with injection molded plastic coating copolymer polypropylene. Polypropylene shall conform to ASTM D 4101.

712.23 Flashing Lights Flashing Lights shall be power operated or battery operated as specified.

(a) Power operated flashing lights shall consist of housing, adapters, lamps, sockets, reflectors, lens, hoods and other necessary equipment designed to give clearly visible signal indications within an angle of at least 45 degrees and from 3 to 90 m [10 to 300 ft] under all light and atmospheric conditions.

Two circuit flasher controllers with a two-circuit filter capable of providing alternate flashing operations at the rate of not less than 50 nor more than 60 flashes per minute shall be provided.

The lamps shall be 650 lumens, 120 volt traffic signal lamps with sockets constructed to properly focus and hold the lamp firmly in position.
The housing shall have a rotatable sun visor not less than 175 mm [7 in] in length designed to shield the lens.

Reflectors shall be of such design that light from a properly focused lamp will reflect the light rays parallel. Reflectors shall have a maximum diameter at the point of contact with the lens of approximately 200 mm [8 in].

The lens shall consist of a round one-piece convex amber material which, when mounted, shall have a visible diameter of approximately 200 mm [8 in]. They shall distribute light

and not diffuse it. The distribution of the light shall be asymmetrical in a downward direction. The light distribution of the lens shall not be uniform, but shall consist of a small high intensity portion with narrow distribution for long distance throw and a larger low intensity portion with wide distribution for short distance throw. Lenses shall be marked to indicate the top and bottom of the lens.

(b) Battery operated flashing lights shall be self- illuminated by an electric lamp behind the lens. These lights shall also be externally illuminated by reflex-reflective elements built into the lens to enable it to be seen by reflex-reflection of the light from the headlights of oncoming traffic. The batteries must be entirely enclosed in a case. A locking device must secure the case. The light shall have a flash rate of not less than 50 nor more than 60 flashes per minute from minus 30 °C [minus 20 °F] to plus 65 °C [plus 150 °F]. The light shall have an on time of not less than 10 percent of the flash cycle. The light beam projected upon a surface perpendicular to the axis of the light beam shall produce a lighted rectangular projection whose minimum horizontal dimension shall be 5 degrees each side of the horizontal axis. The effective intensity shall not have an initial value greater than 15.0 candelas or drop below 4.0 candelas during the first 336 hours of continuous flashing. The illuminated lens shall appear to be uniformly bright over its entire illuminated surface when viewed from any point within an angle of 9 degrees each side of the vertical axis and 5 degrees each side of the horizontal axis. The lens shall not be less than 175 mm [7 in] in diameter including a reflex-reflector ring of 13 mm [½ in] minimum width around the periphery. The lens shall be yellow in color and have a minimum relative luminous transmittance of 0.440 with a luminance of 2854° Kelvin. The lens shall be one-piece construction. The lens material shall be plastic and meet the luminous transmission requirements of this specification. The case containing the batteries and circuitry shall be constructed of a material capable of withstanding abuse equal to or greater than 1.21 mm thick steel [No. 18 U.S. Standard Gage Steel]. The housing and the lens frame, if of metal shall be properly cleaned, degreased and pretreated to promote adhesion. It shall be given one or more coats of enamel which, when dry shall completely obscure the metal. The enamel coating shall be of such quality that when the coated case is struck a light blow with a sharp tool, the paint will not chip or crack and if scratched with a knife will not powder. The case shall be so constructed and closed as to exclude moisture that would affect the proper operation of light. The case shall have a weep hole to allow the escape of moisture from condensation. Photoelectric controls, if provided, shall keep the light operating whenever the ambient light falls below 215 lx [20 foot candles]. Each light shall be plainly marked as to the manufacturer's name and model number.

If required by the Resident, certification as to conformance to these specifications shall be furnished based on results of tests made by an independent testing laboratory. All lights are subject to random inspection and testing. All necessary random samples shall be

provided to the Resident upon request without cost to the Department. All such samples shall be returned to the Contractor upon completion of the tests.

712.32 Copper Tubing Copper tubing and fittings shall conform to the requirements of ASTM B88M Type A [ASTM B88, Type K] or better.

712.33 Non-metallic Pipe, Flexible Non-metallic pipe and pipe fittings shall be acceptable flexible pipe manufactured from virgin polyethylene polymer suitable for transmitting liquids intended for human or animal consumption.

712.34 Non-metallic Pipe, Rigid Non-metallic pipe shall be Schedule 40 polyvinylchloride (PVC) that meets the requirement of ASTM D1785. Fittings shall be of the same material.

712.341 Metallic Pipe Metallic pipe shall be ANSI, Standard B36.10, Schedule 40 steel pipe conforming to the requirements of ASTM A53 Types E or S, Grade B. End plates shall be steel conforming to ASTM A36/A36M.

Both the sleeve and end plates shall be hot dip galvanized. Pipe sleeve splices shall be welded splices with full penetration weld before galvanizing.

712.35 Epoxy Resin Epoxy resin for grouting or sealing shall consist of a mineral filled thixotropic, flexible epoxy resin having a pot life of approximately one hour at 10°C [50°F]. The grout shall be an approved product suitable for cementing steel dowels into the preformed holes of curb inlets and adjacent curbing. The sealant shall be an approved product, light gray in color and suitable for coating the surface.

712.36 Bituminous Curb The asphalt cement for bituminous curb shall be of the grade required for the wearing course, or shall be Viscosity Grade AC-20 meeting the current requirements of Subsection 702.01 Asphalt Cement. The aggregate shall conform to the requirements of Subsection 703.07. The coarse aggregate portion retained on the 2.36 mm [No. 8] sieve may be either crushed rock or crushed gravel.

The mineral constituents of the bituminous mixture shall be sized and graded and combined in a composite blend that will produce a stable durable curbing with an acceptable texture.
Bituminous material for curb shall meet the requirements of Section 403 - Hot Bituminous Pavement.

712.37 Precast Concrete Slab Portland cement concrete for precast slabs shall meet the requirements of Section 502 - Structural Concrete, Class A.

The slabs shall be precast to the dimension shown on the plans and cross section and in accordance with the Standard Detail plans for Concrete Sidewalk Slab. The surface shall be

finished with a float finish in accordance with Subsection 502.14(c). Lift devices of sufficient strength to hold the slab while suspended from cables shall be cast into the top or back of the slab.

712.38 Stone Slab Stone slabs shall be of granite from an acceptable source, hard, durable, predominantly gray in color, free from seams which impair the structural integrity and be of smooth splitting character. Natural color variations characteristic of the deposit will be permitted. Exposed surfaces shall be free from drill holes or indications of drill holes. The granite slabs in any one section of backslope must be all the same finish.

The granite slabs shall be scabble dressed or sawed to an approximately true plane having no projections or depressions over 13 mm [½ in] under a 600 mm [2 ft] straightedge or over 25 mm [1 in] under a 1200 mm [4 ft] straightedge. The arris at the intersection of the top surface and exposed front face shall be pitched so that the arris line is uniform throughout the length of the installed slabs. The sides shall be square to the exposed face unless the slabs are to be set on a radius or other special condition which requires that the joints be cut to fit, but in any case shall be so finished that when the stones are placed side by side no space more than 20 mm [3/4 in] shall show in the joint for the full exposed height.

Liftpin holes in all sides will be allowed except on the exposed face.

SPECIAL PROVISION SECTION 717
ROADSIDE IMPROVEMENT MATERIAL

717.05 Mulch Binder. Change the third sentence to read as follows:

"Paper fiber mulch may be used as a binder at the rate of 2.3 kg/unit [5 lb/unit]."

Statewide
PIN 11242.00
Nov. 4, 2004

SPECIAL PROVISION
Section 411
STONE DUST SURFACE COURSE

Description: This work shall consist of furnishing and installing Separation Geotextile and a 150mm deep Stone Dust Surface Course in conformity with the lines, grades, design and dimensions shown on the plans, this Special Provision, the Standard Specifications, particularly Sections 620 and 722, and as directed by the Project Resident.

Materials: The Geotextile used at the base of the surface course shall meet the requirements of Separation Geotextile, Subsection 722.04 of the Standard Specifications.

Stone Dust shall be from a process operation and shall be composed of fragments of clean durable stone crushed to conform to the following U.S. Sieve gradation, with a sample to be approved by the Project Resident prior to installation.

Metric Sieve Size	U.S. Size	Percent Passing
9.5mm	3/8”	100
4.75mm	#4	96-100
2.36mm	#8	60-75
1.18mm	#16	32-55
0.30mm	#50	8-28
0.15mm	#100	3-15
0.075mm	#200	2-8

Construction Requirements: A 150 mm deep course of stone dust shall be installed over an approved geotextile construction fabric in accordance with Standard Specifications Subsection 620.03. The Stone Dust Surface Course shall be mechanically compacted with cleanly defined mechanically installed edges as directed by the project engineer.

Method of Measurement: Stone Dust Surface Course will be measured by the square meter / foot of the top surface, in place.

Basis of Payment: The accepted quantity of Stone Dust Path will be paid for at the contract unit price per square meter / foot, complete, free of any debris, and accepted in place. The unit price shall be full compensation for excavation, backfill, installation of geotextile fabric, and furnishing all materials, labor, equipment, and other incidentals necessary to complete the work.

Payment shall be made under:

Pay Item	Pay Unit
411.131 Stone Dust Surface Course	Square Meter/ Foot

SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

Standard Specifications, Section 656 is deleted and replaced by this Special Provision. The following information and requirements apply specifically to this Project.

1) If the Work includes the handling or storage of petroleum products or Hazardous Materials including the on site fueling of Equipment, the Resident must be provided with a Spill Prevention Control and Countermeasure Plan (SPCCP) for his/her approval. At a minimum, the SPCCP shall include:

   a) The name and emergency response numbers (telephone number, cellular phone and pager numbers, if applicable) of the Contractor's representative responsible for spill prevention;

   b) General description and location of (1) handling, transfer, storage, and containment facilities of such products or Materials ("activities and facilities") and (2) potential receptors of such products or Materials including oceans, lakes, ponds, rivers, streams, wetlands, and sand and gravel aquifers ("sensitive resources") including the distances between said activities and facilities and said sensitive resources;

   c) Description of preventative measures to be used to minimize the possibility of a spill including Equipment and/or Materials to be used to prevent discharges including absorbent Materials,

   d) A contingency response plan to be implemented if a spill should occur including a list of emergency phone/pager numbers including the Contractor's representative, MDEP Spill Response, the Resident, and local police and fire authorities. For a related provision, see *Standard Specification, Section 105.2.2 - Project Specific Emergency Planning*.

2) The following information and requirements will constitute the Soil Erosion and Water Pollution Control Plan for this Project. The soil erosion and water pollution control measures associated with this work are as follows:

   a) All work shall be done in accordance with the latest revision of the Maine Department of Transportation Best Management Practices for Erosion and Sediment Control (a.k.a. Best Management Practices manual or BMP Manual). The "Table of Contents" of the latest version is dated "1/19/00" (available at http://www.state.me.us/mdot/mainhtml/bmp/bmpjan2000.pdf.)

   b) The on-site person responsible for implementation of this plan, shall be the Contractor's Superintendent or other supervisory employee (the "Environmental Coordinator") with the authority to immediately remedy any deficient controls and shall provide the Resident with their numbers (telephone number, cellular phone and pager numbers, if applicable) where the Environmental Coordinator can be reached 24 hours a day.

   c) A sediment control BMP, such as Erosion Control Mix Berm shall be installed on the contour and down-gradient from any earth disturbance before that disturbance begins.

SPECIAL PROVISION
SECTION 656
Temporary Soil Erosion and Water Pollution Control

d) All areas where soil is disturbed shall be mulched on a daily basis. Areas will be seeded within 12 hours once finished grade has been established. All previously mulched areas shall be maintained and re-mulched on a daily basis if bare areas develop until an acceptable growth of grass has been obtained.

e) Disturbed earth materials shall be disposed of in accordance with all federal, state, and local laws and regulations. If the materials will be stockpiled on-site they shall be contained on-site to prevent sediments from entering any drainage system or from washing into a protected water body or resource.

f) If the earth materials will be reused on-site, they shall be mulched at the end of each working day, and seeded in accordance with *Standard Specification, Section 618 - Seeding*, unless the contract states otherwise. The materials shall be contained, as necessary, to prevent sediments from entering any drainage system or from washing into a protected water body or resource.

g) Winter stabilization BMPs shall be applied in accordance with the MDOT BMP Manual between November 1 and April 15 or during frozen ground conditions.

h) The Environmental Coordinator must inspect and maintain daily all erosion and sediment controls for the duration of the project.

i) Any costs related to this plan shall be considered incidental to the contract.

j) If the Project Resident directs activity that involves soil disturbance beyond the auguring and/or trenching activities or that involve In-stream Work, all permits shall be obtained by the DOT, the Standard Specification 656 shall be re-instituted, and a full SEWPCP will be required and paid for as Extra Work, prior to the start of the new activity.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
REST AREA SANITATION
STATEWIDE

Pin 011242.00
Federal Project # STP-1124 (200) X
PSN 2201

SPECIFICATIONS AND DRAWINGS

September 3, 2004

A. For all work included in this contract the more stringent of the following provisions shall prevail:
   1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to all sections.
   2. State of Maine Department of Transportation, "Standard Specifications for Highways and Bridges," Revision 2002, shall govern all work under this contract in accordance with the contract documents.

allied *engineering, inc.*

FULL SERVICE CONSULTING ENGINEERS

STRUCTURAL • MECHANICAL • ELECTRICAL • ENVIRONMENTAL • CONSTRUCTION ADMINISTRATION
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SECTION 01060 – REGULATORY AND SAFETY REQUIREMNETS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements governing regulatory and safety requirements.

1.2 REGULATORY REQUIREMENTS

A. The Contractor will be responsible for compliance with all applicable Occupational Safety and Health Administration-(OSHA) Standards; United States Department of Environmental Protection-National Emissions Standards for Hazardous Air Pollutants-(EPA-NESHAPS) Asbestos Regulations - 40 CFR 61, Subpart M. and Maine Department of Environmental Protection-(DEP) rules and regulations.

B. The Contractor agrees to indemnify and hold harmless Allied Engineering and the Owner from any expenses caused by a decision of an authorized representative of the State of Maine or the United States Department of Labor in connection with an alleged violation of the provisions of either the Construction Safety Act of 1969 or the Williams-Steiger Occupational Safety and Health Act of 1970, including fines, penalties or corrective measures caused by commission or omission by the Contractor, his employees, assigns or agents.

C. All work shall be performed in accordance with Occupational Safety and Health Administration Standards 29 CFR 1910.1001 and 1926.58 (latest revision) to include the OSHA Thirty Minute Excursion Limit. Respiratory Protection will comply with all of Paragraph 29 CFR 1910.134. All work and work areas covered in this contract will be subject to inspections by representatives of the Occupational Safety and Health Administration-(OSHA) to ensure that employees and the general public are not subject to hazardous working conditions or environment.

D. The Contractor shall be responsible for posting "Material Safety and Data Sheets" (MSDS) as required by the U.S. Department of Labor Occupational Safety and Health Administration for use on all materials used on site.

E. The Contractor shall be responsible for full compliance with 29 CFR 1926.59 Hazard Communication.

1.3 PERMITS

A. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of work.

1.4 SAFETY REQUIREMENTS

A. Project shall be considered a hard hat area. No visitors shall be permitted on the premises except to the construction trailer without hard hats. Two hard hats shall be available to visitors at the construction trailer provided visitors are authorized by the Contractor, Engineer, or Owner to visit the site.

B. The Contractor shall be responsible for notification to all workers, visitors, Owner's employees and representatives that may be reasonably expected to come in contact with Hazardous Materials as defined in 29 CFR 1926.59.

C. Contractor Employees: The Contractor shall furnish sufficient personnel to perform all work specified within the contract.

1. The Contractor's employees will conduct themselves in a proper and efficient manner at all times.
2. The Contractor expressly agrees to remove from the site any individual whose continued employment is deemed by the Engineer to be contrary to the public interest or inconsistent with the best interest of the State of Maine programs and services.

D. Damage or Loss of Contractor's Supplies and Contractor's Employees' Property: The Contractor is responsible for taking the action necessary to protect his supplies, materials, and equipment and the personal property of his employees from loss, damage, or theft. The Contractor shall be responsible for all damages to persons and/or property that occur as a result of his fault or negligence in connection with the prosecution of the work. He shall also be responsible for all materials delivered and work performed until completion and final acceptance.

E. Manholes and Confined Spaces:

1. Contractors are obliged and fully expected when working in manholes to follow 29 CFR 1910 and 29 CFR 1926 and should be guided by the National Institute of Occupational Safety and Health (NIOSH) criteria document for confined spaces.
2. Guarding Manholes and Street Openings: When covers of manholes or vaults are removed, the opening shall be promptly guarded by a railing, temporary cover, or other suitable temporary barrier which is appropriate to prevent an accidental fall through the opening and to protect employees working in the manhole from foreign objects entering the manhole.
3. While work is being performed in the manhole, a person with basic first aid training shall be immediately available to render assistance if there is cause for believing that a safety hazard exists.
4. Before an employee enters a manhole or confined spaces, the following steps shall be taken:

    a. The internal atmosphere shall be tested for combustible gas and, except when continuous forced ventilation is provided, the atmosphere shall also be tested for oxygen deficiency.
    b. When unsafe conditions are detected by testing or other means, the work area shall be ventilated and otherwise made safe before entry.

5. An adequate continuous supply of air shall be provided while work is performed in manholes or confined spaces under any of the following conditions:

a. Where combustible or explosive gas vapors have been initially detected and subsequently reduced to a safe level by ventilation.
b. Where organic solvents are used in the work procedure.
c. Where open flame torches are used in the work procedure.
d. Where the manhole is located in the portion of a public right of way open to vehicular traffic and/or exposed to a seepage of gas or gasses.
e. Where a toxic gas or oxygen deficiency is found.

6. In no way will the Owner or the Asbestos Project Specialist perform confined space inspections for a Contractor. If the Owner, Asbestos Project Specialist, Workers, and Contractor are in the same confined space, the Contractor is still obligated to have a competent person check the space.

END OF SECTION

SECTION 01100 – SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The more stringent of the following provisions shall prevail for all work related to this project:
   1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
   2. State of Maine Department of Transportation, "Standard Specifications for Highways and Bridges," Revision 2002, apply to this Section..

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: Project consists of eleven (11) waterless privies and all work incidental to construction and site-work for a turn-key project. The various items of work for this project are hereinafter specified under the respective branch headings of the work or shown on the accompanying drawings and shall be included in the contracts made for the completion of any respective divisions of the work. Such contracts shall also include necessary details reasonably incidental to the proper execution and completion of such work.

   1. Project Locations:

1.	Haystack	Rt. 163	Castle Hill
2.	Crawford	Rt. 9	Crawford
3.	East Musquash	Rt. 6	Topsfield
4.	Carry Brook	Rt. 161	T16 R5
5.	Dolby Flowage	Rt. 157	T4 R7
6.	Twin Lakes	Rt. 11	T4 IP
7.	Arnold's Way	Rt. 201	Bingham
8.	Acadia Trail	Rt. 3	Searsmont
9.	Riverside	Rt. 2	Bethel
10.	Twin Bridge	Rt. 117	Otisfield
11.	Weston	Rt. 1	Weston North

B. Whenever a conflict, contradiction, or discrepancy between any statutes, regulations, plans or specifications, or if the Contractor request clarification of his responsibilities hereunder, it is the Contractor's responsibility to obtain the advance written approval of the Engineer prior to deviating from any of the specifications.

C. The Work consists of building 11 privy buildings, preferably built at contractor owned location. Upon acceptance of the buildings, transport the buildings to the individual sites and install a 1000 gallon Polyethylene tank with a structural support column and concrete slab and sill per specifications, and installation of the building and all incidental associated work. Work will include all incidental site work required for a complete turn-key project. The contract will include the excavation of 6" of existing top soil and installation of a 6" deep stone dust walk at each site on a unit cost basis. Incidental seeding and /or mulching with wood waste erosion control mulch will also be on a unit cost basis.

1.3 CONTRACT METHOD

A. Project will be constructed under a single contract

1.4 CONTRACTOR'S USE OF PREMISES

A. Confine operations at site to areas permitted by:

1. Law, Ordinances, Permits, Contract Documents.
2. As defined by limit of work line on Site Plan.

B. Limited on-site storage of materials will be permitted.

C. The establishment of a camp within the project site will not be permitted.

D. The contractor shall at all times conduct his operations to insure the least inconvenience to the public. Partial site / road closings will be permitted upon request of the owner.

E. Contractor shall not limit use of premises to Owner or public.

F. Coordinate work with the owner, MDOT Landscape Architect @ 207-624-3085

1.5 OWNER PROVIDED MATERIALS/ INFORMATION

A. LAYOUT OF WORK
1. The owner will set the base line, stake out the final location and a finish floor bench mark for each site. The contractor shall lay out the work by accurately measuring from these controls. All work improperly located due to contractor's errors or omissions shall be corrected by him at no additional expense.

B. The contractor shall preserve the controls established by the owner. Controls set by the owner that are destroyed by the contractor will be replaced by the owner, with the cost of the replacement deducted from the contractors' final payment.

C. Locations and elevations are subject to final field adjustment by the owner before construction. The contractor shall immediately notify the owner of apparent errors discovered. If changes in stake out are required, the contractor shall cooperate with the owner in prompt establishment of field corrected controls.

D. Contractor shall ensure positive drainage. Notify the owner of any apparent discrepancies to correct situations before proceeding.

1.6 WORK UNDER OTHER CONTRACTS

A. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract.

1.7 DRAWINGS FURNISHED

A. On the award of the contract, the owner will issue to the Contractor 5 sets of the "Contract Drawings and Specifications" for use in his office and on the job. The Engineer will also furnish such additional copies as may be required for submission to public authorities to accompany applications for permits

B. Additional copies of drawings and specifications will be issued at cost of reproduction.

C. It is the intention that these specifications and the drawings accompanying same shall provide for "Maine DOT Rest Area Sanitation Privy Facilities Replacements" to be completed in all its respective parts. Any work shown on the drawings and not particularly described in the specifications, or vice versa, shall be furnished by the Contractor as part of his contract.

1.8 EXAMINATION OF THE SITE

A. All Contractors' submitting proposals for the work shall first examine the site and all conditions thereon. All proposals shall take into consideration all such conditions as may affect the work under this contract.

1.9 CONTRACTORS DUTIES

A. Asbestos-Free Materials: Contractor shall provide certification that all materials used for construction under this contract are 100% asbestos-free. Refer to Section 01340 – Shop Drawings, Product Data and Samples for submittals.

B. Except as specifically noted, provide and pay for:

1. Labor, materials and equipment.
2. Tools, construction equipment and machinery
3. Water, heat and utilities required for construction
4. Other facilities and services necessary for proper execution and completion of work

C. The owner will secure and pay for all permits, government fees, and licenses that are applicable at the time of bid for proper execution and completion of the work

D. Promptly submit written notice to the Engineer of observed variance of Contract Documents from legal requirements.

1. Appropriate Modifications to Contract Documents will adjust necessary changes to comply with Codes and Regulations.
2. Assume responsibility for work known to be contrary to such requirements without notice

E. Enforce strict discipline and good order among employees. Do not employ unfit persons or persons unskilled in assigned task.

F. Contractor's employees shall not transport, drink, or have in their possession on the job site any intoxicating beverage. Possession of any controlled substances without a physician's prescription is also prohibited. Any Contractor's employee appearing to be under the influence of an intoxicating beverage or narcotics will be escorted off the property and turned over to a competent escort as determined by the Engineer's Representative. Any vehicle found to contain

controlled substances or controlled substance residue will be reported to the State Police for investigation.

G. Use or possession of firearms, ammunition and/or explosives is prohibited. Where explosives are required due to construction requirements, specific handling requirements and approvals are required.

H. Work Permit or Citizenship: The contractor shall certify, in writing, that all employees of the Contractor and Subcontractor are citizens of the United States or are otherwise legally entitled to be employment.

I. Motor Vehicles:

1. All employees operating motor vehicles shall have a valid Operator's License. All vehicles shall display a valid state license plate and inspection sticker if required in the state in which the vehicle is registered.

J. WEATHER PROTECTION:

1. During the construction period, it is the Contractor's responsibility that the building be under constant protection from the weather. Should there be any weather damage to the building's interior, such damage is to be rectified to the satisfaction of the Engineer without cost to the owner.

K. COMPLETION DATE:

1. The anticipated completion date for completed construction and all incidental sitework of these facilities to the Owner is June 15, 2005. Work extending beyond this date shall be subject to liquidated damages in the amount of $100 per working day.

L. START DATE:

1. All work including shop drawings and submittals may commence upon entering a contract with the Owner.

END OF SECTION

SECTION 01250 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

1.2 This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

A. The owner (MDOT) may issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on the Change order form prescribed by Maine Department of Transportation.

1.4 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, The owner will issue a Change Order for signatures of Owner and Contractor on the MDOT required form.

END OF SECTION

SECTION 01270 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for unit prices.

DEFINITIONS

B. Unit price is [an amount proposed by bidders, stated on the Bid Form, as] a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.2 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, [applicable taxes,] overhead, and profit.

B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

END OF SECTION

SECTION 01290 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 APPLICATIONS FOR PAYMENT

A. Application for Payment shall be submitted monthly to the Engineer in accordance with the General Conditions. The Engineer will evaluate individual and total requests; and if he concurs, he will forward to the Owner for payment as stated in the above General Conditions.

B. Each Application for Payment shall be consistent with previous applications and payments as certified by Engineer and the owner representative and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

C. Payment Application Times: The date for each progress payment shall be determined on site. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

D. The Contractor shall present Application for Payment based on materials incorporated into the work and labor performed and a reasonable amount of materials delivered to the engineer and the owners representative not less than 5 work days prior to the scheduled monthly requisition meeting. Payments shall be authorized for 95% of the amount stated in the application, provided the Engineer shall be satisfied with the correctness of the amount stated. The engineer may request the contractor adjust the requisition for payment amount to be paid to that which they (the Engineer) shall deem to be just. No more than one payment on the contract shall be made in any one month.

E. For each calendar day that any work shall remain uncompleted after the date of completion specified in the contract, the amount per day listed below in the Schedule of Liquidated Damages shall be deducted from any money due the Contractor not as a penalty, but as liquidated damages, provided that due account shall be taken of any adjustment of the date of completion granted by Change Order.

END OF SECTION

SECTION 01310 – PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

PART 2 - SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General project coordination procedures.
2. Conservation.
3. Coordination Drawings.
4. Administrative and supervisory personnel.
5. Project meetings.

B. The General contractor shall be responsible for over all coordination of the project

1. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

2.2 COORDINATION

A. Coordination: Coordinate construction operations included in various Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation. Coordinate sequence of work to accommodate Owner's occupancy.

B. If necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Coordination of Security: All security coordination shall be through the General contractor. The Contractor shall be expected to keep the owners representative informed of any deviation in the normal work schedule. The owners representative shall be given a minimum of two (2) hours notice when a Contractor is not going to be working on a scheduled day because of inclement weather, lack of material etc.

D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.

3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Attendance of the Preconstruction Conference
6. Attendance of Progress meetings.
7. Preinstallation conferences.
8. Project closeout activities.

E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

2.3 SUBMITTALS

A. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service such equipment.

B. Coordinate requests for substitutions to assure compatibility of space, of operating elements, and effect on work of other sections.

C. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.

1. Indicate relationship of components shown on separate Shop Drawings.
2. Indicate required installation sequences.
3. Refer to Division 15 Section "Basic Mechanical Materials and Methods" and Division 16 Section "Basic Electrical Materials and Methods" for specific Coordination Drawing requirements for mechanical and electrical installations.

D. Staff Names: Within 5 days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

2.4 PRECONSTRUCTION CONFERENCE

A. The successful low bid Contractor will be required to attend a Pre-construction Conference Meeting at MDOT Headquarters Augusta, ME. At said meeting, the Contractor shall supply to the Owner and the Engineer, in writing, the name of the Project Foreman and/or Manufacturer's Approved Applicator directing all phases of the installation.

2.5 PROGRESS MEETINGS

A. The Contractor will schedule and administer monthly construction progress meetings, called meetings, and preinstallation conferences throughout the progress of the work.

B. The Contractor will preside at meetings, record minutes, and distribute copies after meeting to the owner and the General contractor. The General contractor shall be responsible to provide copies of the minutes to any subcontractors that attend the meetings.

C. Location of Meetings: To be determined.

D. Attendance: The Contractor, Job Superintendent, Owner and any appropriate subcontractors..

E. Minimum Agenda:

1. Review of work progress.
2. Field observations, problems and decisions.
3. Identification of problems, which impede planned progress.
4. Review of submittals schedule and status of submittals.
5. Review of off-site fabrication and delivery schedules.
6. Maintenance of progress schedule.
7. Corrective measures to regain projected schedules.
8. Planned progress during succeeding work period.
9. Coordination of projected progress.
10. Maintenance of quality and work standards.
11. Effect of proposed changes on progress schedule and coordination.
12. Other business relating to work.
13. Preinstallation conferences may also be held at the Progress meetings.

2.6 PROJECT CLOSEOUT

A. Coordinate completion and cleanup of work of separate sections in preparation for substantial completion.

B. After Owner's occupancy of premises, coordinate access to site by various sections for correction of defective work and work not in accordance with Contract Documents to minimize disruption of Owner's activities.

C. Assemble and coordinate closeout submittals specified.

END OF SECTION

SECTION 01320 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Contractor's Construction Schedule.

1.2 SUBMITTALS

A. Submittals Schedule: Submit 2 copies of schedule. Arrange the following information in a tabular format:

1. Scheduled date for first submittal.
2. Specification Section number and title.
3. Submittal category (action or informational).
4. Name of subcontractor.
5. Description of the Work covered.
6. Scheduled date for Engineers final release or approval.

B. Preliminary Construction Schedule: Submit 2 printed copies; one a single sheet of reproducible media, and one a print.

C. Contractor's Construction Schedule: Submit 2 printed copies of initial schedule, one a reproducible print and one a blue- or black-line print, large enough to show entire schedule for entire construction period.

1.3 QUALITY ASSURANCE

A. Scheduling Consultant Qualifications: The Contractors schedule may be created and maintained by the contractors own forces.

B. Pre-scheduling Conference: If requested by the owner, a pre-scheduling conference shall be conducted at Project site. At this meeting all the owner, Engineer and contractor shall Review methods and procedures related to the Preliminary Construction Schedule and Contractor's Construction Schedule, including, but not limited to, the following:

1. Verify availability of qualified personnel needed to develop and update schedule.
2. Discuss constraints, including phasing, work stages, and interim milestones.
3. Review time required for review of submittals and resubmittals.
4. Review requirements for tests and inspections by independent testing and inspecting agencies.

5. Review time required for completion and startup procedures.
6. Review and finalize list of construction activities to be included in schedule.
7. Review submittal requirements and procedures.
8. Review procedures for updating schedule.

1.4 COORDINATION

A. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from parties involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.

1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
2. Initial Submittal: Submit within 15 days after date of Owner-Contractor Agreement a preliminary bar-chart schedule. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.

    a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.

END OF SECTION

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
3. Prepare and submit Project Record Documents, operation and maintenance manuals. Complete final cleaning requirements, including touchup painting.
4. Touch up and otherwise repair and restore exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, The Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. The owner will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.2 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit certified copy of The Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by the owner. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, the Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. The Owner will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.3 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize items applying to each location by task. Include the following information at the top of each page:

    a. Location
    b. Date.
    c. Name of Contractor.
    d. Action and schedule

1.4 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

    a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    e. Remove snow and ice to provide safe access to building.
    f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    h. Remove glazing compounds and other materials. Remove labels that are not permanent.
    i. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

j. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.

END OF SECTION

SECTION 02230 - SITE CLEARING

PART 1 - GENERAL

A. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.2 MATERIAL OWNERSHIP

A. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.3 PROJECT CONDITIONS

A. Utility Locator Service: Notify “Dig Safe” service for area where Project is located before site clearing.

B. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

PART 2 - PRODUCTS

2.1 SILT FENCE

A. Mirafi 100x geotextile fabric with net backing, 1- ½” nominal square hardwood post, and tensioning belt. 3 feet wide with integral belt laced through the reinforced top edge, and with UV protection. Silt fence shall be Envirofence, as manufactured by Nicolon Mirafi group, or approved equal.

B. Straw bales: shall be weed free, straw bales with nylon tie string or wire bound. Stake down with 1” square hardwood stakes a minimum of 3 feet long.

PART 3 - EXECUTION

PART 4 - PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Locate and clearly flag trees and vegetation to remain or to be relocated.

C. Protect existing site improvements to remain from damage during construction.

4.2 EROSION AND SEDIMENTATION CONTROL

A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.

B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.

C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

4.3 CLEARING AND GRUBBING

1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
2. Grind stumps and remove roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

C. Remove sod and grass before stripping topsoil.

D. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.

1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
2. Do not stockpile topsoil within tree protection zones.
3. Stockpile surplus topsoil to allow for respreading deeper topsoil.

4.4 DISPOSAL

A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off of Owner's property.

END OF SECTION

SECTION 02250 - DEWATERING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Furnish, operate and maintain dewatering equipment for control, collection, and disposal of ground and surface water entering trenches and excavations.

1.1 RELATED DOCUMENTS

A. The more stringent of the following provisions shall prevail:
   1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
   2. State of Maine Department of Transportation, "Standard Specifications for Highways and Bridges," Revision 2002, apply to this Section.

PART 2 PRODUCTS

2.1 EQUIPMENT

A. Provide pumps, drains, piping and other facilities necessary to keep excavations and trenches free of water including spare units available for immediate use in the event of equipment failure.

PART 3 EXECUTION

3.1 PROTECTION

A. Protect watercourses, sewer systems and adjacent properties from siltation by use of sediment ponds or other measures acceptable to Owner. Keep excavations clear of groundwater, surface water, seepage, sewage and stormwater using BMPs.

3.2 INSTALLATION

A. Install, construct and maintain equipment and facilities required for work of this section.

B. Dispose of water removed from Work in a suitable manner which will not interfere with other work, cause erosion, damage pavements, other surfaces or property and is acceptable to Owner:

C. Remove dewatering equipment and facilities when no longer required.

D. Backfill excavations in accordance with this project manual.

E. Repair damage resulting from dewatering operations.

END OF SECTION

SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Preparing subgrades for slabs-on-grade, walks and Mulched areas.
2. Excavating and backfilling for vaults and structures.
3. Drainage course for slabs-on-grade.
4. Subbase course for gravel walks.
5. Stone dust course for gravel walks.

B.

C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.

1. Notify Engineer not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Architect's written permission.
3. Contact utility-locator service for area where Project is located before excavating.

PART 2 - PRODUCTS

PART 3 - SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations. Materials shall be free of snow, ice, frozen material, clay lumps, mud, refuse, organic matter, brick, concrete, ashes or other objectionable objects.

1. Sieve analysis shall be in accordance with ASTM C136-96a

B. Structural fill/ Gravel:

1. Maine Department of Transportation (MDOT Standard Specification, Highway and Bridges 2002. Type A, screened or crushed gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances.

2. The Gradation of the portions passing a 3-inch sieve shall meet the following:

Sieve Designation	Percent passing by Weight
2”	100%
1/2”	45%- 70%
1/4”	30%- 55%
No. 40	0%- 15%
No. 200	0%- 5%

C. Stone for Trench and foundation drains.

1. Gradation: ASTM C33-97, size No. 4.

Sieve Designation	Percent passing by Weight
2”	100%
1-1/2”	90%- 100%
1”	20%- 55%
3/4”	0%- 15%
3/8”	0%- 5%

D. Bedding:

1. Sand; Hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances.
2. Gradation: MDOT 703.05 Aggregate for sand leveling.

Sieve Designation	Percent passing by Weight
3/4”	100%
3/8”	85%- 100%
No. 200	0%- 5%

E. Common Fill

1. General

   a. Soil suitable for embankment construction with a maximum 6” stone size. It shall be free from vegetable matter, lumps or balls of clay and other deleterious substances. The moisture content shall be sufficient to provide the required compaction and stability.
   b. Reused fill: Use approved excavated material before importing common borrow.

2. Borrow Fill: When excavated material is not available or is not approved for reuse, import fill from off site meeting requirements of MDOT 703.18 for common borrow. The use of imported fill will be included incidental to any other work in this contract.

3. Stone Dust: A 150 mm deep course of stone dust shall be installed over an approved geotextile construction fabric in accordance with Standard Specifications Subsection 620.03. The Stone Dust Surface Course shall be mechanically compacted with cleanly defined mechanically installed edges as directed by the project engineer.

Method of Measurement: Stone Dust Surface Course will be measured by the square meter of the surface compacted in place.

Stone Dust: Metric Sieve Size	U.S. Size	Percent Passing
9.5mm	3/8"	100
4.75mm	#4	96-100
2.36mm	#8	60-75
1.18mm	#16	32-55
0.30mm	#50	8-28
0.15mm	#100	3-15
0.075mm	#200	2-8

F. 1. MDOT 703.14 Blotter (MDOT Brown Book, 1995). Aggregate for blotter shall consist of sharp durable particles of sand conforming to the following table

Sieve Designation		Percentage by Weight
Metric	English	Passing Square Mesh Sieve
19.0 mm	3/4 inch	100
4.75 mm	No.4	40 -100
425 μm	No.40	10 - 50
75 μm	No.200	0 - 5.0

The aggregate shall be free from vegetable and other deleterious material.

G. Gravel Aggregate Base:

1. MDOT2002 Green Book. Item 703.06 Aggregate for Base and subbase. Subsection b. Type D material. Aggregate shall be sand or gravel of hard durable particles free from vegetable matter, lumps or balls of clay and other deleterious substances. The gradation of the part that passes a 75 mm (3 in) sieve shall meet the grading requirements in the following table:

Sieve Designation		Percentage by Weight
Metric	English	Passing Square Mesh Sieve
6.3 mm	1/4 in	25 - 70
425 μm	No.40	0 - 30
75 μm	No.200	0 - 7.0

Aggregate shall not contain the particles of rock that will not pass the 150 mm (6 in) square mesh sieve.

PART 4 - EXECUTION

4.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Protect and maintain erosion and sedimentation controls, which are specified in Division 2 Section "Site Clearing," during earthwork operations.

4.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
2. Install a dewatering system, specified in Division 2 Section "Dewatering," to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

4.3 EXCAVATION, GENERAL

a. Classified Excavation: Excavate to subgrade elevations incidental to construction.

4.4 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
2. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch (25 mm). Do not disturb bottom of excavations intended as bearing surfaces.

4.5 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades incidental to contract work.

4.6 SUBGRADE INSPECTION

A. If engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

B. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

4.7 STORAGE OF SOIL MATERIALS

1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

4.8 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Removing concrete formwork.
3. Removing trash and debris.
4. Removing temporary shoring and bracing, and sheeting.
5. Installing permanent or temporary horizontal bracing on horizontally supported walls.Place backfill on subgrades free of mud, frost, snow, or ice.

4.9 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under building slabs, use engineered fill.
5. Under footings and foundations, use engineered fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

4.10 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

4.11 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:

1. Under structures, building slabs, steps, and pavements, scarify and re-compact top 12 inches (300 mm) of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Under walkways, scarify and re-compact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 95 percent.
3. Under lawn or unpaved areas, scarify and re-compact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 85 precent.

4.12 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Lawn or Unpaved Areas: Plus or minus 1 inch.
2. Walks: Plus or minus 1 inch.
3. Pavements: Plus or minus 1/2 inch.

C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch (13 mm) when tested with a 10-foot (3-m) straightedge.

4.13 SUBBASE AND BASE COURSES

A. Place subbase and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase and base course under pavements and walks as follows:

1. Place base course material over subbase course under hot-mix asphalt pavement.
2. Shape subbase and base course to required crown elevations and cross-slope grades.
3. Place subbase and base course 6 inches (150 mm) or less in compacted thickness in a single layer.
4. Place subbase and base course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
5. Compact subbase and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than [95] percent of maximum dry unit weight according to ASTM D 698

END OF SECTION

SECTION 02540 – VAULT TOILET TANK AND ACCESSORIES

PART 1 - GENERAL

A. This Section includes the following:

1. Polyethylene Underground vaults with integral center support column, 24”clean out, 12” vet and oblong toilet risers.
2. Kick proof wall vents
3. Handicap toilet riser w seat and lid
4. 12” polyethylene vent pipe
5. Toilet paper dispenser
6. Urinals.
7. Grab bars
8. Door, frame and hardware assemblies
9. Lexan windows
10. floor drains
11. DEFINITIONS

B. ABS: Acrylonitrile-butadiene-styrene plastic.

C. FRP: Fiberglass-reinforced plastic.

D. HDPE: High-density-polyethylene plastic.

E. PE: Polyethylene plastic.

F. PVC: Polyvinyl chloride plastic.

1.2 SUBMITTALS

A. Product Data: For the following:

1. Polyethylene Underground vaults with integral center support column, 24”clean out, 12” vent and oblong toilet risers.
2. Kick proof wall vents
3. Handicap toilet riser
4. 12’ ABS vent pipe
5. Toilet paper dispenser
6. Door, frame and hardware assemblies
7. Lexan window assemblies
8. Urinals.
9. Grab bars
10. floor drains

B. Shop Drawings: Include manhole openings, covers, pipe connections, and accessories for the following:

1. Polyethylene tanks.

1.3 QUALITY ASSURANCE

A. Product Options: Drawings indicate size, profiles, and dimensional requirements of septic tank system and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 POLYETHYLENE TANK

A. Reinforced Polyethylene vault:

B. Capacity and Characteristics:

1. Capacity: 1000 Gallon.
2. Characteristics: Single-chamber, molded one piece design, fabricated for waterless septic tank application. The tank shall have an integral center support column. Tank shall be equal to Romtec 1000 gallon cross-linked polyethylene underground vault, as manufactured by Romtec, Inc. 18240 North Bank Road, Roseburg, Oregon 97470 (www.romtec.com)

a.

	ASTM test	Value
Density	D- 1505-85	0.944 g/cm3
Tensile strength	DE638-84	3000psi
Environ. Stress crack resistance	D1693-70	>1000 hrs.

C. Accessories:

1. Adaptor kit for; vent riser, clean out riser and cover, toilet riser.
2. 36” and 42” Stainless steel grab bars equal to those listed as accessories by Romtec Inc.
3. 2 roll stainless steel toilet paper dispenser equal to those listed as accessories by Romtec Inc.

2.3 WATERLESS URINALS

A. Manufacturer

1. Waterless Co.

B. Specifications:

1. Urinal to be equal to Waterless Co.(1050 Joshua Way Vista, CA 92083 USA) Sonora, Model #2004, elongated rim; Wall hung urinal.
2. Provide without removable trap insert.
3. Complies with ADA, ANSI Z124.9, CSA®, Listed Classified By IAPMO R&T C-3346.
4. Mount at 17" above finished floor to lip of urinal.
5. Urinal 2" drain outlet installs and drains to field drilled tank tapping.
6. Color: Sanitary white.
7. To be made of fiberglass reinforced Polyester®.
8. Approx. Weight: 20 Lbs.
9. Use standard sanitation practices to maintain fixture.
10. Furnished complete with: Two unit integrated wall hangers, AllFlange™ slots for flange bolts, fastening hardware, and gasket.

2.4 TOILET RISER, SEAT, AND LID

1. White cross-linked polyethylene riser. Polystyrene seat and lid. Stainless steel hardware. Handicap riser shall be 18” high and the standard shall be 15” high.
2. Toilet riser and appurtences shall be manufactured by Romtec, Inc., or approved equal.

2.5 DOOR, FRAME AND HARDWARE

1. Heavy-duty steel 6 panel doors and frames as manufactured by Steelcraft or approved equal.
   a. Door model E21 6 panel door CE-16 series Heavy duty Commercial door made of 16 Ga. Galvannealed steel panel with 14 Ga. Reinforcement channels at the top and bottom and 7 Ga. Steel reinforcement at the hinges.
   b. Size: 3’-0” x 7’-0”
   c. Do not prep the door for a lock set.
2. Heavy duty F series frame made of 14ga. Galvannealed steel with 7 Ga. Steel reinforcement at the hinges do not prep the frame for a lock set, manufacturer to match door manufacturer.

A. Hardware:

1. Hinges: 1-1/2 Pr of hinges per door, Heavy weight 4-1/2” hinges with non removable pins (provide set screw in hinge barrel that when tightened into a grove in the hinge pin, and prevents removal of the pin while the door is closed. Hinges shall be equal to Stanley FBB 179- 4 ½” with a 32D finish..
2. Dead bolt: equal to Stanley 1088 surface mounted dead bolt with a 1/2” x 5/8” X 6 1/2” bolt. Mount to door with tamper resistant through bolts at height to meet ADA requirements.

3. 1” diameter solid stainless steel round bar 10” center to center with a projection of 2-1/2” and a 1-1/2” clearance. Mount to door with tamper resistant through bolts, mount to meet ADA requirements.

2.6 LEXAN WINDOWS

1. Lexan windows and frames, standard 34” x 10 “depth to suit wall framing.

2.7 FLOOR DRAINS

A. Floor Drains,: Comply with ASME A112.21.1M.

B. Manufacturers

1. Smith, Jay R. Mfg. Co.
2. Zurn Industries, Inc., Specification Drainage Operation
3. Zurn Industries, Inc., Jonespec Div
4. Josam Co.
5. Watts Industries, Inc., Drainage Products Div.

C. Privy Floor Drains: Equal to Smith No. 2010(-A) cast iron drain and flashing collar with adjustable 5" diameter adjustable nickel bronze top.

1. Field drill tank tapping.

2.8 LOUVERS

A. Provide sidewall louvers by Romtec. Kick proof Louvers shall be 18 ¼”x 22 ¾” x 2” and shall provide 111 sq. in. free area, minimum. Louver shall incorporate a 1/8” black steel frame and expanded mesh welded to galvanized louvers with fine mesh screen.

2.9 POLYETHYLENE VENT PIPE

A. Provide 12" diameter polyethylene vent pipes as manufactured by Romtec Inc. Vent pipes shall extend a minimum of 3’ above the highest point of the roof.

2.10 PIPES AND FITTIINGS

A. Refer to Part 3 "Piping Applications" Article for identification of systems where piping materials specified below are used.

B. Sewer Pipe and Fittings: PVC, complying with ASTM D 3034, SDR 35, nonperforated, for solvent-cement or elastomeric gasket joints.

1. Solvent Cement: ASTM D 2564.
2. Gaskets: ASTM F 477, elastomeric seal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions for compliance with requirements and other conditions affecting performance of vault system.

B. Verify compatibility with and suitability of soil structure and materials.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 EARTHWORK

A. Excavating, trenching, and backfilling are specified in Division 2 Section "Earthwork."

3.3 POLYETHYLENE TANK INSTALLATION

A. Install Reinforced Polyethylene vault as specified below:

1. Follow manufactures direction for vault installation with the exception of size of vault pit and the need to backfill with concrete. Excavate the hole for the vault only big enough to install the tank and afford enough room to place and compact the back fill around it. Backfill using Structural fill as defined in section 02300 Earthwork.

3.4 PIPING INSTALLATION

A. Install piping according to the following:

1. PVC Sewer Pipe and Fittings: ASTM D 2321.
2. Field drill a hole in the top of the tank as required for installation of the urinal drain pipe.

3.5 PIPE JOINT CONSTRUCTION

A. Basic piping joint construction is specified in Division 2 Section "Piped Utilities - Basic Materials and Methods." Where specific joint construction is not indicated, follow piping manufacturer's written instructions.

3.6 FLOOR DRAINS

A. Install floor drains at low points of surface areas to be drained. Set grates of drains flush with finished floor, unless otherwise indicated.

1. Position floor drains for easy access and maintenance.
2. Set floor drains below elevation of surrounding finished floor to allow floor drainage. Set with grates depressed according to the following:

a. 1/4-inch per foot.

3. Field drill a hole in the top of the tank as required for installation of the drain pipe.

3.7 CONNECTIONS

A. Piping installation requirements are specified in other Division 2 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

END OF SECTION

SECTION 02930 - LANDSCAPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The more stringent of the following provisions shall prevail:
   1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
   2. State of Maine Department of Transportation, “Standard Specifications for Highways and Bridges,” Revision 2002, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Ground cover (erosion control Mulch).
   2. Stone dust walks.

B. Related Sections include the following:

   1. MDOT “STANDARD SPECIFICATION” Section 621- Landscaping for seed types

   2. Division 2 Section "Site Clearing" for protection of existing trees and planting, topsoil stripping and stockpiling, and site clearing.
   3. Division 2 Section "Earthwork" for excavation, filling, and rough grading and for subsurface aggregate drainage and drainage backfill materials.

1.3 DEFINITIONS

A. Finish Grade: Elevation of finished surface of planting soil.

B. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.

D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

E. Erosion control mulch: Coarse organic bark mix used to filter turbid water and provide erosion resistance in sensitive areas.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification: For each of the following:

1. Erosion control mix: supply 5 lb of erosion control mulch, in a labeled plastic bag.

PART 2 - PRODUCTS

PART 3 - Add requirements for other types of trees classified in ANSI Z60.1. Examples include palms, specimen trees, and trees for special uses such as cut back or sheared and topiary. Add distinguishing characteristics for each type of tree.

3.1 TOPSOIL

A. Loam: MDOT 615, pH range of 5.5 to 8, a minimum of 10 to 20 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials.

1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.

a. Supplement with imported or manufactured loam from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.

3.2 MULCHES

A. Erosion control mulch: Organic substance of source separated materials, separated at the point of waste generation, that may include; forest residues, bark, paper mill flume grit, stump grindings and aged wood waste. Erosion control mix shall be free of refuse, physical contaminates, material toxic to plant growth, and reprocessed wood products. Erosion control mix shall meet MDOT 717.04 (d) standards.

Erosion control mix shall be an organic substance of source separated materials, separated at the point of waste generation, that may include: forest residues, bark, paper mill flume grit, stump grindings and aged wood waste. Erosion control mix shall be free of refuse, physical contaminants, material toxic to plant growth, and reprocessed wood products. Erosion control mix may contain rocks less than 100 mm (4 in.) in diameter and shall be a well graded material conforming to the following:

1. pH between 5.0 – 8.0; particle size (by weight)
2. Particle size (by weight):
   a.)100 passing a 150 mm (6 in.)screen
   b.) 75 – 85 % passing a 19 mm (0.75 in) screen
3. Soluble salts content <4.0 mmhos/cm
4. Organic matter 20 to 100%, dry weight basis

EXECUTION

A. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 CLEANUP AND PROTECTION

3.4 DISPOSAL

A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 03300 – CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

PART 2 - SUMMARY

A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mix design, placement procedures, and finishes.

B. Related Sections include the following:

1. Division 2 Section "Earthwork" for drainage fill under slabs-on-grade.

2.2 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume.

2.3 REFERENCES

A. American Concrete Institute (ACI):

1. 117 - Specifications for Tolerances for Concrete Construction and Materials
2. 301 - Specifications for Structural Concrete for Buildings
3. 305R - Hot Weather Concreting
4. 306R - Cold Weather Concreting
5. 309R - Guide for Consolidation of Concrete
6. 315 - Manual of Standard Practice for Detailing Reinforced Concrete
7. 347 - Recommended Practice for Concrete Formwork
8. 318 - Building Code Requirements for Reinforced Concrete

B. American Society for Testing and Materials (ASTM):

1. A 185 - Welded Steel Wire Fabric for Concrete Reinforcement
2. A 615 - Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
3. C 33 - Concrete Aggregate
4. C 39 - Compressive Strength of Cylindrical Concrete Specimens
5. C 94 - Ready-Mixed Cement
6. C 150 - Portland Cement
7. C 260 - Air-Entraining Admixtures for Concrete
8. C 309 - Liquid Membrane-Forming Compounds for Curing Concrete
9. C 494 - Chemical Admixtures for Concrete

C. Federal Specifications (FS):

1. TT-C-800 - Curing Compound, Concrete, for New and Existing Surfaces

D. Concrete Reinforcing Steel Institute (CRSI):

1. CRSI - Manual of Standard Practice and Recommended Practice for Placing Reinforcing Bars (MSP-latest edition)

E. American Welding Society (AWS)

F. Scaffolding and Shoring Institute (SSI):

1. Scaffolding and Shoring Safety Rules

2.4 SUBMITTALS

A. Product Data: For each type of manufactured material and product indicated.

B. Design Mixes: For each concrete mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.

1. Provide cement manufacturer's letter of certification and chemical content test results stating that the Portland cement is in compliance with ASTM designation C 150.
2. Indicate amounts of mix water to be withheld for later addition at Project site.

C. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:

1. Cementitious materials and aggregates.
2. Steel reinforcement and reinforcement accessories.
3. Admixtures.
4. Waterstops.
5. Curing materials.
6. Floor and slab treatments.
7. Adhesives.
8. Epoxy joint filler.
9. Repair materials.

2.5 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed concrete Work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

1. Flatwork (interior and exterior slabs) shall be placed, finished and cured under the direct supervision of a concrete technician with 2 years experience and that has placed and finished not less than 10,000 square feet of concrete slabs.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

1. Manufacturer must be certified according to the Department of Transportation’s “Certificate of Ready Mixed Concrete Production Facilities”.

2. Owner shall provide all concrete material testing and concrete cylinder samples for this project. Contractor shall coordinate schedule of installations with the Owner to allow ample time for the owner to schedule appropriate testing.

C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.

D. ACI Publications: Comply with the following, unless more stringent provisions are indicated:

1. ACI 301, "Specification for Structural Concrete."
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1. Flatwork (interior and exterior slabs) Preinstallation Conference: Conduct conference at Project site to review all details and requirements for the batching, mixing, transporting, placing, finishing, and curing all interior and exterior flatwork operations. Require representatives of each entity directly concerned with flatwork operation to attend, including the following:

a. Contractor and Contractor's superintendent.
b. Flatwork subcontractors.
c. Engineer.
d. Maine Department of Transportation’s representative.

2.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 3 - PRODUCTS

3.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

1. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:

a. High-density overlay, Class 1, or better.
b. Medium-density overlay, Class 1, or better, mill-release agent treated and edge sealed.
c. Structural 1, B-B, or better, mill oiled and edge sealed.
d. B-B (Concrete Form), Class 1, or better, mill oiled and edge sealed.

2. Manufactured forming system: metal or other panel system with prior review and approval.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

C. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch (19 by 19 mm), minimum.

D. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

E. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

1. Furnish units that will leave no corrodible metal closer than 1 inch (25 mm) to the plane of the exposed concrete surface.

3.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

1. Bars shall be clean and free from rust, scale or coatings that will reduce bond. Reinforcing steel shall be capable of bending 180 degrees and rebending to original shape without fracture.

B. Plain-Steel Wire: ASTM A 82, as drawn.

3.3 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or fiber-reinforced concrete of greater compressive strength than concrete.

B. Joint Dowel Bars: Plain-steel bars, ASTM A 615/A 615M, Grade 60 (Grade 420). Cut bars true to length with ends square and free of burrs.

3.4 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, Type II.

B. Normal-Weight Aggregate: ASTM C 33, uniformly graded, and as follows:

1. Nominal Maximum Aggregate Size: 3/4 inch (19 mm).

C. Water: Potable and complying with ASTM C 94.

3.5 ADMIXTURES

A. General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material and to be compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.

B. Air-Entraining Admixture: ASTM C 260. Sika AER by the Sika Chemical Corp. or approved equal.

C. Water-Reducing Admixture: ASTM C 494, Type A. Eucon W12-75 by the Euclid Chemical Corp. “Pozzolith 200N by Master Builders “Plastocrete 161” by the Sika Chemical Corp. or approved equal.

D. Non-Corrosive Accelerator: ASTM C 494, Type C or E, Accelguard 80 by the Euclid Chemical Co. or "Polar Set" by W. R. Grace and Co. or approved equal.

   a. Non –corrosive accelerator shall have long-term test data proving its non-corrosive effect on reinforcing steel.

3.6 2.9 CURING MATERIALS

A. Water: Clean and Potable.

B. Curing Compound (Exterior Concrete Application): Conform to method of ASTM C 156 for compliance with ASTM C 309, non-coloring, non-staining, curing compound. Curing compound shall be SpecSeal AC 1315 as manufactured by PROSOCO, Inc. or approved equal.

C. Waterproof Paper for Curing and Protection (Interior Non-Exposed Concrete): Conform to ASTM C 171, Type I. Paper shall be lapped and seams taped with reinforced tape, orange label Sisalcraft, Floor Cure Wet Strength by Glas-Kraft, Inc., or approved equal.

3.7 RELATED MATERIALS

A. Doweling Adhesive: A two-component, vinylester blend resin equal to HI HY150 adhesive as manufactured by Hilti Fastening Systems, Tulsa, Oklahoma or approved equal.

B. Non-Shrink Grout: Premixed compound with non-metallic aggregate, cement, water-reducing and plasticizing agents capable of minimum compression strength of 2,400 lbs. Non-shrink grout shall be "Eucon N-S" (non-metallic) by the Euclid Chemical Co., "Masterflow 713" (non-metallic) by Master Builders, Five Star Grout by U.S. Grout Corp., or approved equal.

3.8 REPAIR MATERIALS

A. Slurry: Slurry shall consist of the same proportions of cement to fine aggregates used in the regular concrete mix (coarse aggregate only omitted) and shall be well mixed with such amount of water as will produce a thick consistency.

B. Dry Pack: Dry pack for cosmetic concrete repairs only shall consist of one part cement to 2-1/2 parts fine aggregate (screen out all materials retained on No. 4 sieve), mixed with a minimum

amount of water, in small amounts. The consistency shall be such that when a ball of the mixture is compressed in the hand it will maintain its shape, showing finger marks, but without showing any surface water.

C. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch (3.2 mm) and that can be feathered at edges to match adjacent floor elevations.

1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3 to 6 mm) or coarse sand as recommended by underlayment manufacturer.
4. Compressive Strength: Not less than 4100 psi (29 MPa) at 28 days when tested according to ASTM C 109/C 109M.

D. Repair Topping: Traffic-bearing, cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch (6 mm).

1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3 to 6 mm) or coarse sand as recommended by topping manufacturer.
4. Compressive Strength: Not less than 5700 psi (39 MPa) at 28 days when tested according to ASTM C 109/C 109M.

3.9 CONCRETE MIXES

A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mix or field test data bases, as follows:

1. Proportion normal-weight concrete according to ACI 211.1 and ACI 301.

B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for the laboratory trial mix basis.

C. Table for Working Stress Concrete:

USE	STRENGTH 28 DAYS	MAXIMUM SIZE COARSE AGGREGATE	CEMENT MAXIMUM SLUMP AT PLACEMENT	WEIGHT OF CEMENT	TYPE OF CEMENT	WATER-CEMENT RATIO
Privy Floor Slab & Curbs	4000#/sq. in.	3/4"	4"	611#	II	0.55

D. All concrete shall contain the specified water-reducing admixture. All slabs placed below 50 degrees F shall contain the specified non-corrosive accelerator. All exterior concrete shall contain an approved air-entraining admixture.

E. All exterior concrete shall have an air content of five percent to seven percent.

F. All exterior concrete subjected to freezing and thawing shall have a maximum water-cement ratio of 0.53. All concrete subjected to deicers shall have a maximum water-cement ratio of 0.45.

G. All mix design, batching, placing, finishing, curing, joint sealing and patching of color conditioned concrete shall be in strict accordance with the manufacturers recommendations

H. Air Content: Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content as follows within a tolerance of plus 1 or minus 1.5 percent, unless otherwise indicated:

1. Air Content: 6 percent for 3/4-inch- (19-mm-) nominal maximum aggregate size.

I. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

J. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing admixture in concrete, as required, for placement and workability.
2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

3.10 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

3.11 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and furnish batch ticket information.

B. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94 and ASTM C 1116, and furnish batch ticket information (floor slabs only).

PART 4 - EXECUTION

4.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.

1. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117. Excessive deflection of forms after concrete is poured shall be sufficient cause for rejection of that portion of concrete and formwork. Excessive deflection will be considered to be that which will produce visible and noticeable waves in the finished concrete.
2. Construct forms so that walls will key into each other at ends unless poured monolithically.

B. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:

1. Class A, 1/8 inch (3 mm). (Exposed concrete)
2. Class B, 1/4 inch (6 mm). (Non-exposed concrete)

C. Construct forms tight enough to prevent loss of concrete mortar.

D. All possible care shall be taken in the formwork to produce surfaces free from honeycomb or other defects.

E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal.

1. Do not use rust-stained steel form-facing material.

F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

G. Schedule the work and notify other trades in time so that provisions for their work in the formwork can be made without delaying progress of the project. Verify that all sleeves, pipes, etc., for electrical, plumbing, heating and ventilation, or other work are installed.

H. Chamfer exterior corners and edges of permanently exposed concrete, where indicated on drawings.

I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

K. Bolts, rods or other approved devices shall be used for internal ties. They shall be so arranged that when the forms are removed, no metal shall be within 1" of any surface.

L. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

M. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

4.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use Setting Drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1. Secure information about and provide for all openings, offsets, recessed nailing blocks, channel chases, anchors, ties, inserts, etc., in the formwork before concrete is poured.
2. Install anchor bolts, accurately located, to elevations required.

    a. The setting of all anchor bolts and the grouting for all structural steel base plates shall be included as part of this contract. Bolts and base plates will be furnished under Section 05500 - Metal Fabrications, and Section 13125 – Metal Building Systems.
    b. All column base plates, equipment bases, and other locations noted in the structural drawings shall be grouted with the specified non-shrink grout. All exposed grout shall be the specified non-metallic type.

4.3 REMOVING AND REUSING FORMS

A. General: Formwork that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete provided concrete is hard enough to not be damaged by form-removal operations and provided curing and protection operations are maintained.

B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Engineer.

4.4 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. All steel bars and wire shall be of size, gauge and length indicated, accurately bent or formed to shapes detailed or scheduled by experienced shops using methods that will not injure the materials.
2. Steel reinforcing shall not be bent in a manner that will injure the material or the embedding concrete. Bars with kinks or bends not shown on the plans shall not be used. Heating of reinforcement for bending will not be permitted. Bars shall be bent once only (no rebending or straightening allowed) unless shown as such on the drawings.
3. All details of reinforcement not shown or indicated on the drawings or specifically called for in the specifications shall conform to ACI 315.
4. Lap all bars at splices, corners and intersections a minimum of 36 bar diameters unless otherwise indicated.

5. All intersecting concrete walls shall be tied with #4L bars 3'-0" long, bent 18" x 18" spaced 12" on center, outside face only unless otherwise indicated.
6. Splices of reinforcement shall not be made at points of maximum stress. Splice lengths shall be a minimum of 36 bar diameters unless otherwise indicated and shall provide sufficient lap to transfer the stress between bars by bond and shear. Stagger splices of adjacent bars where possible. All splices and laps at corners and intersections shall be tied with wire at each end.
7. Where obstructions (pipes, conduit, ducts, etc.) prevent the intended placement of reinforcing, provide additional reinforcing as directed by the Engineer or his Representative around the obstruction to match that reinforcing interrupted.
8. Provide additional stirrups, ties, trim bars, etc., as directed around all openings, sleeves, pipes, and conduits, which pass through structural elements.
9. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

1. Coverage of bars (including stirrups and column ties) shall, unless otherwise shown, be as follows:

Slabs (on grade):	2" soil face, 1-1/2" top face
Walls/curbs:	2" clear to form at exterior

2. Misplaced Reinforcing: If any reinforcing bars are found to be misplaced after concrete has been placed, the Engineer shall be notified immediately and no correction or cutting shall be made without his direction. Misplaced bars shall not be bent or kinked. Any redesign and/or reinforcing required because of misplaced bars shall be at the Contractor's expense.
3. All reinforcing shall be kept separate from soil, pipe, conduit ducts, etc., by approved non-metallic separators.
4. Reinforcement shall not have welded joints unless indicated on the drawings or unless prior approval has been given by the Engineer. Welding shall conform to the requirements of the American Welding Society Structural Welding Code for reinforcing steel D1.4. Field welding shall be performed by AWS certified welders.
5. Shop- or field-weld reinforcement according to AWS D1.4, where indicated.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

4.5 JOINTS

A. General: on this project no construction joints or control joints are required.

B. Dowel Joints: Install dowel sleeves and dowels or dowel bar and support assemblies at joints where indicated.

4.6 MIXING CONCRETE

A. General: The concrete shall be mixed in the quantities required for immediate use, and any which has developed initial set or exceed the time limit of ASTM C 94 shall not be used. No retempering of mortar or concrete shall be allowed under any circumstances. Concrete shall be proportioned, mixed and placed only in the presence of the Engineer or his Authorized Representative. The Contractor shall give ample notice to the Engineer before mixing is commenced. Aggregate size will be adjusted to suit conditions of work. Pumping of concrete shall be permitted only after approval by the Engineer of the Pumping Contractor and the pumping equipment and method to be employed. The Engineer shall be notified of dates when pumping of concrete shall be performed to permit his on-the-job inspection of the operations.

B. Final proportions shall be in accordance with approved mix designs. Adjustments to approved proportions, for whatever reason, shall be approved by the Engineer.

4.7 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Remove loose dirt, mud, standing water, and foreign matter from excavations or from cavities.

C. Thoroughly clean reinforcement and other embedded items free from loose rust and other matter. Assure reinforcing is held securely in place.

D. Thoroughly wet wood forms (except coated plywood), bottom and sides of trenches, base underslab, and adjacent concrete or masonry at least one hour in advance of placing concrete; securely close cleanout and inspection ports; repeat wetting as necessary to keep forms damp.

E. Equipment shall be maintained clean and of sufficient quantity and capacity to efficiently execute the work required.

F. Do not add water to concrete during delivery, at Project site, or during placement, unless approved by Engineer.

G. Before placing concrete, water may be added at Project site, subject to limitations of ACI 301.

H. Deposit concrete continuously or in layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.

I. Deposit concrete in forms in horizontal layers no deeper than 24 inches (600 mm) and in a manner to avoid inclined construction joints. Place each layer while preceding layer is still plastic, to avoid cold joints.

1. Consolidate placed concrete with mechanical vibrating equipment. Use equipment and procedures for consolidating concrete recommended by ACI 309R.

    a. concrete shall be vibrated into final position in forms with an internal type vibrating machine. The vibration shall have a frequency of not less than 8,000

vibrations per minute. The mechanical vibrating equipment shall be satisfactory to the Engineer.

b. The vibration shall be of sufficient intensity and duration to cause flow or settlement of the concrete and complete consolidation. Over vibration, especially of mixtures that are too wet, may cause segregation and will be avoided. A sufficient number of vibrators shall be provided to permit consolidation of each batch before the next batch is delivered and without delaying the delivery.

c. The vibrations shall be applied directly to the concrete, and vibration through the forms shall not be permitted. Vibration shall be applied at the point of deposit and in the area of freshly deposited concrete. The concrete shall be placed in layers of uniform thickness

2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than the visible effectiveness of the vibrator. Place vibrators to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mix constituents to segregate.
3. When conditions make puddling difficult, or where the reinforcement is congested, batches of mortar containing the same proportions of cement to sand used in the concrete shall be deposited in the forms. The operation of filling with the regularly specified mix shall be carried on at such a rate that the mix is at all times plastic and flows readily into the spaces between the bars.
4. In thin walls or inaccessible portions of the forms where rodding is impractical, the concrete shall be worked into place by tapping or hammering forms adjacent to the freshly deposited concrete.
5. The Contractor's attention is called to the importance of making the concrete dense, and he shall provide sufficient labor to the entire satisfaction of the Engineer to thoroughly consolidate the concrete, avoid air pockets and voids in exposed sections, and leave smooth, uniform surfaces after forms are removed.
6. Should any honeycombed concrete be disclosed upon removal of forms, the Contractor shall immediately cut out the said honeycombed portions back to solid concrete and shall fill the opening thus formed with a concrete of the same proportions as that specified for the section of work in which the fault occurs.
7. When placing fresh concrete upon hardened concrete, the latter shall be thoroughly roughened and cleaned of all loose material, scum or latency. The bonding compound shall be applied and the new concrete placed while the bonding compound is still tacky.
8. Joints in the concrete work shall be made only in places and the manner specified by the Engineer.
9. The Contractor's attention is called to the importance of properly and carefully placing concrete around reinforcement, as the reinforcing metal must not be exposed; and in cases where reinforcing metal becomes exposed on the surface, that portion of work must be removed and re-laid as the covering of same by plastering with cement mortar will not be allowed. All reinforcing rods or other reinforcing material shall be lightly tapped so that they will retain their original position.
10. No concrete shall be retempered except as allowed in ASTM C 94 nor shall set concrete be used as aggregate.

J. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.

    a. Reinforcement, unless otherwise indicated, shall be placed one-half the thickness of the slab.

3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, free of humps or hollows, before excess moisture or bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
6. In addition to steel bar reinforcement, slabs shall be reinforced with fibrous concrete reinforcement which is to be added when the concrete is being batched in strict accordance with the manufacturer's recommendations.
7. Slabs shall be monolithically placed with control joints. Sawed control joints will be located as indicated on the drawings and/or as directed by the Engineer. Floors shall be cleaned of objects before saw cutting begins. A true, continuous saw cut is what is expected as a finish result.

K. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When air temperature has fallen to or is expected to fall below 40 deg F (4.4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators, unless otherwise specified and approved in mix designs.
4. Contractor shall have on the job, ready to install, adequate equipment for heating the materials and the freshly placed concrete and for enclosing the work in accordance with the requirements specified herein.

L. Hot-Weather Placement: Place concrete according to recommendations in ACI 305R and as follows, when hot-weather conditions exist:

1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

M. Protection:

1. Concrete just placed shall be protected from rain in an approved manner until the concrete has set, or if a slab, the curing compound has dried.
2. Concrete, when placed in the forms, shall have a temperature of not less than 50 degrees F or more than 90 degrees F. Freshly placed concrete and the surrounding air shall be maintained at a temperature of 50 degrees F or greater for a period of seven days after placing. If high early strength concrete is used, the aforementioned time period may be reduced to three days. The methods of protection and curing shall be such as to prevent evaporation of moisture from the concrete and injury to the surface.
3. Should it later develop that any concrete work has become injured in any way by freezing or otherwise, the defective concrete shall be repaired or replaced as directed by the Engineer at no added expense to the Owner. Repair materials shall include all reinforcement grouts, dry pack, admixtures, epoxy and aggregates as may be necessary

4.8 FINISHING FLOORS AND SLABS

A. General: Comply with recommendations in ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

1. All interior portions of the concrete floor slabs shall be finished true and smooth by magnesium trowel. All exterior portions of the slabs shall be broom finished.
2. When a section of the concrete floor is completed, it shall be left entirely undisturbed until the concrete is thoroughly hardened.
3. Adequate provisions will be made to eliminate the possibility of accidental encroachment upon the newly concreted area.

B. Float Finish: Consolidate surface by hand floating. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

C. Trowel Finish: Do not apply a steel trowel finish to air-entrained concrete.

D. Broom Finish: Apply a broom finish to exterior concrete platforms.

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Engineer before application.

4.9 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete Work.

4.10 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with recommendations in ACI 305R for hot-weather protection during curing.

B. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, and other surfaces as indicated below

1. Exterior:

a. Concrete slabs, and related work shall receive the specified curing compound applied in strict accordance with the manufacturer's written recommendations.

4.11 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 (1.2-mm) sieve, using only enough water for handling and placing.

C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13 mm) in any dimension in solid concrete but not less than 1 inch (25 mm) in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Engineer.

D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
2. After concrete has cured at least 14 days, correct high areas by grinding.
3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch (6 mm) to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to

manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.

5. Repair defective areas, except random cracks and single holes 1 inch (25 mm) or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least 3/4 inch (19 mm) clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mix as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
6. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.

E. Repair materials and installation not specified above may be used, subject to Engineer's approval.

END OF SECTION

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Framing with dimension lumber.
2. Wood blocking and nailers.
3. Roof perimeter wood blocking
4. Wood furring.
5. Sheathing.
6. Plywood backing panels.
7. Building paper.

B. Related Sections include the following:
1. Division 6 Section "Finish Carpentry" for nonstructural carpentry items exposed to view and not specified in another Section.

1.2 DEFINITIONS

A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise indicated.

B. Exposed Framing: Dimension lumber not concealed by other construction.

C. Lumber grading agencies, and the abbreviations used to reference them, shall conform to industry standards including: NELMA, NLGA, SPIB, APA.

D. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

a. Metal Framing Anchors: may be Harlen Metal Products, Inc., KC Metals Products, Inc., Simpson Strong-Tie Company, Inc., United Steel Products Company, Inc,. Southeastern Metals Manufacturing Co., Inc.

2.2 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.

1. Factory mark each piece of lumber with grade stamp of grading agency.

2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.
4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.

B. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber. Do not use material that is warped or does not comply with requirements for untreated material.

2.3 DIMENSION LUMBER

A. General: Provide dimension lumber of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.

B. Non-Load-Bearing Interior Partitions: No. 2 and any of the following species:

1. Mixed southern pine; SPIB.
2. Spruce-pine-fir (south) or Spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA.
3. Northern species; NLGA.
4. Spruce-pine-fir; NLGA.
5. Western woods; WCLIB or WWPA.

C. Exterior and Load-Bearing Walls No. 2 or better any of the following species:

1. Southern pine; SPIB.
2. Spruce-pine-fir (south); NELMA, WCLIB, or WWPA.
3. Spruce-pine-fir; NLGA.

D. Ceiling Joists (Non-Load-Bearing): No. 2 and any of the following species:

1. Mixed southern pine; SPIB.
2. Spruce-pine-fir (south); NELMA, WCLIB, or WWPA.
3. Spruce-pine-fir; NLGA.

E. Joists, Rafters, and Other Framing Not Listed Above: No. 2 grade and any of the following species:

1. Douglas fir-larch; WCLIB or WWPA.
2. Douglas fir-south; WWPA.
3. Douglas fir-larch (north); NLGA.
4. Hem-fir; WCLIB or WWPA.
5. Hem-fir (north); NLGA.
6. Southern pine; SPIB.
7. Spruce-pine-fir (south); NELMA, WCLIB, or WWPA.
8. Spruce-pine-fir; NLGA.

F. Exposed Exterior Framing Indicated to Receive a Stained or Natural Finish: Provide material hand-selected for uniformity of appearance and freedom from characteristics that would impair finish appearance.

1. Species and Grade: As indicated above for load-bearing construction of same type.

2.4 MISCELLANEOUS LUMBER

A. General: Provide lumber for support or attachment of other construction, including the following:

1. Roof perimeter blocking.
2. Blocking.
3. Cants.
4. Nailers.
5. Furring.
6. Bracing

B. For items of dimension lumber size, provide No. 2 lumber with 19 percent maximum moisture content and any of the following species:

1. Eastern softwoods; NELMA.
2. Northern species; NLGA.
3. Western woods; WCLIB or WWPA.

C. For exposed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:

1. Western red cedar, B grade; NLGA or WWPA.

2.5 SHEATHING

A. Plywood Wall Sheathing: Exterior sheathing.

1. Span Rating: Not less than 32/16.
2. Thickness: Not less than 1/2 inch.

B. Oriented-Strand-Board Wall Sheathing: Exposure 1 sheathing.

1. Span Rating: Not less than 32/16.
2. Thickness: Not less than 1/2 inch.

C. Plywood Roof Sheathing: Exterior, Structural I Exposure 1 sheathing.

1. Span Rating: Not less than 32/16.
2. Thickness: Not less than 1/2 inch

D. Oriented-Strand-Board Roof Sheathing: Exposure 1, sheathing.

1. Span Rating: Not less than 32/16.
2. Thickness: Not less than 1/2 inch.

2.6 PLYWOOD BACKING PANELS

A. Plywood backing panels behind FRP panels shall be ½" exterior grade plywood.

2.7 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: CABO NER-272.

D. Wood Screws: ASME B18.6.1.

E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

F. Lag Bolts: ASME B18.2.1..

G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

2.8 MISCELLANEOUS MATERIALS

A. Building Paper: Asphalt-saturated organic felt complying with ASTM D 226, Type I (No. 15 asphalt felt), unperforated.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.

B. Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

C. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
   1. Table 2305.2, "Fastening Schedule," in the BOCA National Building Code.
   2. Table 2306.1, "Fastening Schedule," in the Standard Building Code.

D. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.

E. Use finishing nails for exposed work, unless otherwise indicated. Countersink nail heads and fill holes with wood filler.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
   1. install wood blocking as required to support all accessories such as but not limited to grab bars, toilet paper dispensers, and urinals.

B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Build anchor bolts into masonry during installation of masonry work. Where possible, secure anchor bolts to formwork before concrete placement.

C. Integrity of exterior walls and/or rated wall assemblies to be maintained. Plywood to run continuously the length of designated walls. Intersecting walls are not to interrupt plywood.

3.3 WOOD FRAMING INSTALLATION, GENERAL

A. Framing Standard: Comply with AFPA's "Manual for Wood Frame Construction," unless otherwise indicated.

B. Do not splice structural members between supports.

C. Where built-up beams or girders of 2-inch nominal- dimension lumber on edge are required, fasten together with 2 rows of 20d nails spaced not less than 32 inches o.c. Locate one row near top edge and other near bottom edge.

   1. For continuous members, locate end joints over supports.

3.4 WALL AND PARTITION FRAMING INSTALLATION

A. General: Arrange studs so wide face of stud is perpendicular to direction of wall or partition and narrow face is parallel. Provide single bottom plate and double top plates using members of 2-inch nominal thickness whose widths equal that of studs, except single top plate may be used for non-load-bearing partitions. Anchor plates to supporting construction, unless otherwise indicated.

1. For exterior walls, provide 2-by-4-inch nominal- size wood studs spaced 16 inches o.c., unless otherwise indicated.
2. For interior partitions and walls, provide 2-by-4-inch nominal- size wood studs spaced 16 inches o.c., unless otherwise indicated.

B. Construct corners and intersections with three or more studs. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

C. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Set headers on edge and support on jamb studs.

1. For non-load-bearing partitions, provide double-jamb studs with headers not less than 4-inch nominal depth for openings 48 inches and less in width, 6-inch nominal depth for openings 48 to 72 inches in width,.
2. For load-bearing walls, provide double-jamb studs for openings 72 inches and less in width, and triple-jamb studs for wider openings.

3.5 FLOOR JOIST FRAMING INSTALLATION

A. General: Install floor joists with crown edge up and support ends of each member with not less than 1-1/2 inches of bearing on wood or metal, or 3 inches on masonry. Attach floor joists as follows:

1. Where supported on wood members, by using metal framing anchors.
2. Where framed into wood supporting members, by using wood ledgers as indicated or, if not indicated, by using metal joist hangers.

B. Do not notch in middle third of joists; limit notches to one-sixth depth of joist, one-third at ends. Do not bore holes larger than 1/3 depth of joist; do not locate closer than 2 inches from top or bottom.

3.6 CEILING JOIST AND RAFTER FRAMING INSTALLATION

A. Ceiling Joists: Install ceiling joists with crown edge up and complying with requirements specified above for floor joists. Face nail to ends of parallel rafters.

1. Where ceiling joists are at right angles to rafters, provide additional short joists parallel to rafters from wall plate to first joist; nail to ends of rafters and to top plate and nail to first joist or anchor with framing anchors or metal straps.

B. Rafters: Notch to fit exterior wall plates and toenail or use metal framing anchors. Double rafters to form headers and trimmers at openings in roof framing, if any, and support with metal hangers. Where rafters abut at ridge, place directly opposite each other and nail to ridge member or use metal ridge hangers.

1. At hips, provide hip rafter of size indicated or, if not indicated, of same thickness as regular rafters and 2 inches deeper. Bevel ends of jack rafters for full bearing against hip rafter.

C. Provide special framing as indicated for eaves, overhangs, dormers, and similar conditions, if any.

3.7 BUILDING PAPER APPLICATION

A. Apply building paper horizontally with 2-inch overlap and 6-inch end lap; fasten to sheathing with galvanized staples or roofing nails. Cover upstanding flashing with 4-inch overlap.

END OF SECTION

SECTION 06200 – FINISH CARPENTRY

1.1 WORK INCLUDED

A. Furnish all labor, materials, equipment, supplies and perform all operations necessary to complete the finish carpentry work in accordance with the drawings and these specifications.

B. The work includes, but is not limited to the following:

1. Trim
2. Outside Finish
3. Inside Finish
4. Miscellaneous Carpentry

1.2 RELATED WORK

A. Section 02540 – Vault toilet tank and accessories

B. Section 06100 - Rough Carpentry

C. Section 07600 - Flashing and Sheet Metal

D. Section 07900 - Sealants

E. Section 08210 - Wood Doors

F. Section 09900 - Painting

1.3 QUALITY ASSURANCE

A. All standing and running trim shall conform to AWI standards for custom grade where used for painted or opaque finish.

B. All plywood shall conform to AWI custom grade.

1.4 SUBMITTALS

A. Product data: Submit two (2) copies of product date sheets for the following materials:

1. Cedar shingles
2. Cedar trim
3. Soffit vents

1.5 DELIVERY, STORAGE AND HANDLING

A. Handle and store all materials so as not to cause damage to the material.

B. Store all materials under cover and protected from dampness.

C. Store all wood items on blocking up off of concrete floors.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Wood Trim:

1. Natural Finish: All interior and exterior standing and running trim and finish lumber shall be AWI #1 white Cedar with no loose knots or edge knots, kiln dried; unselect for color except that care shall be exercised to avoid installation of a light piece adjacent to a dark piece.

B. Wall shingles shall be Eastern whit cedar from a certified source, clear, re-sawn and re-butted 18" long and ½" at the butt.

C. Soffit Ventilators: Continuous soffit vent, Model #SV202" by Air Vent, Inc Products or approved equal with insect screen.

2.2 FINISH HARDWARE

A. The finish hardware specified in Section 02540 - Finish Hardware, shall be received, checked against the invoices, stored, cared for and installed under this section of the specifications.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Finish Carpentry:

1. Frames: Install all required doors , door frames, window frames and sashes, and trim as detailed. Countersink all nails and screws sufficiently to allow for proper puttying by the painter.
2. Trim: Install with properly countersunk fastenings, all required trim as shown on the drawings.
3. Soffit and Fascia: Construct all outside soffits and fascias of 1 x # 1 white cedar. Back stain, before erection, all exposed wood and plywood and caulk joints with exterior grade sealant.
4. Install louvers in strict accordance with manufacturer's recommendations.
5. Install soffit ventilators where shown on drawings and install in accordance with manufacturer's recommendations.
6. Install all toilet accessories including but not limited to grab bars and toilet paper dispensers.
7.

B. Workmanship:

1. General: Work must be performed by skilled finish carpenters capable of leaving the work clean and ready for painter's finish and without damaging other abutting materials.
2. Erection: All work must be erected plumb, level and straight. Joints must be accurate and tight, and fastenings shall be provided to adequately hold the work in place and to prevent twisting. Nails shall be sized to assure holding, but not to split the member. Nails or screws shall be concealed wherever possible and set for putty. Exterior nails must be aluminum or galvanized. Exterior butt joints shall be caulked with exterior grade sealant.
   Doors shall be hung to swing with no binding and windows shall be carefully adjusted - both with allowance for painter's finish, and finally all items must be checked after painting and left in smooth working condition with all hardware attached and adjusted.

3. Back Painting: All exterior and interior running trim shall be back and edge coated with a wood stain compatible with the finish coat. Built-up doors and window trim, exterior and interior shall be treated in the same manner.
4. Cleaning and Protection: Work shall be sanded to remove all feather edges, glue smears or pencil and finger markings and left protected wherever necessary by non-staining paper ready for the painter.

C. Install doors, weather-stripping and thresholds. (See Section 02540 – vault toilet tank and accessories.

END OF SECTION

SECTION 06620 - GLASS-FIBER-REINFORCED PLASTIC

PART 1 - GENERAL

A. This Section includes the following:
   1. Glass-fiber-reinforced wall panels.

B. Related Sections include the following:
   1. Division 6 Section "Rough Carpentry" for plywood backer for surface-mounted sheets.

1.2 SUBMITTALS: Furnish samples for Engineers approval.

A. Product Data: Include physical characteristics, such as durability, resistance to fading, and flame resistance, for each glass-fiber-reinforced panel system component indicated.

B. Shop Drawings: Show locations, extent, and installation details of each glass-fiber-reinforced panel system component. Show methods of attachment to adjoining construction.

C. Samples for Selection: Manufacturer's sample of sections of plastic material showing the full range of colors and textures available for each component indicated.
   1. Sheet or Panels: 6-by-6-inch- (150-by-150-mm-) square samples of each glass-fiber-reinforced panel required.
   2. Trim: 12-inch- (300-mm-) long Samples of each type of glass-fiber-reinforced panel component required. Include examples of joinery, corners, and field splices.

D. Material Test Reports: From a qualified testing agency indicating compliance of each glass-fiber-reinforced panel component with requirements indicated, based on tests performed by testing agency within the past five years.

E. Maintenance Data: For each glass-fiber-reinforced panel component to include in maintenance manuals specified in Division 1.
   1. Include recommended methods and frequency for maintaining optimum condition of panels under anticipated use conditions. Include precautions against using cleaning materials and methods that may be detrimental to plastic finishes and performance.
   2. QUALITY ASSURANCE:

F. Installer Qualifications: An experienced installer who has completed installation of glass-fiber-reinforced panel system components similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

G. Source Limitations: Obtain each color, grade, finish, and type of glass-fiber-reinforced panel system component from a single source with resources to provide components of consistent quality in appearance and physical properties.

H. Fire-Test-Response Characteristics: Provide impact-resistant wall protection system components with the following surface-burning characteristics, as determined by testing

materials identical to those required in this Section per ASTM E 84 by a testing and inspecting agency acceptable to authorities having jurisdiction. Identify impact-resistant wall protection system components with appropriate markings of applicable testing and inspecting agency.

1. Flame Spread: 25 or less.
2. Smoke Developed: 450 or less.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Store glass-fiber-reinforced wall panel materials in original undamaged packages and containers inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.

1. Maintain room temperature within the storage area at not less than 70 deg F (21 deg C) during the period plastic materials are stored. Keep sheet material out of direct sunlight to avoid surface distortion.
2. Panels should be stored on a solid, flat, dry surface. Do not stack on a fresh concrete floor or any other surface that emits moisture. Lay panels flat. Do not stand panels on edge. Store all products inside.

1.4 PROJECT CONDITIONS

A. Environmental Limitations: Do not install glass-fiber-reinforced wall panel components until the space is enclosed and weatherproof and ambient temperature within the building is maintained at not less than 70 deg F (21 deg C) for not less than 72 hours before beginning installation. Do not install glass-fiber-reinforced wall panel systems until that temperature has been attained and is stabilized.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering impact-resistant wall protection system products that may be incorporated into the Work include, but are not limited to, the following:

1. Fire-X Glasbord with Surfaseal by Kemlite Company.

2.2 MATERIALS

A. Plastic Sheet Wall Covering Material: Semirigid, textured, chemical- and stain-resistant, high-impact-resistant, PVC or acrylic-modified vinyl plastic sheet; thickness as indicated, meeting the following.

1. Barcol Hardness (scratch resistance) of 55 as per ASTM D-2583.
2. Panels will exhibit no more than a 0.038% weight loss after a 25-cycle Taber Abrasion Test using CS-17 abrasive wheels with 1000 g. wt.
3. Gardner Impact Strength of 22 in. - lbs. (25.6 cm - kg) showing no visible damage on front side per ASTM D-3029.
4. FMRC (Factory Mutual Research Center) approved. Subject to the conditions of approval as described in FMRC Report J.I. IV549.AM-embossed FXI .09” only.

5. Meets USDA / FSIS Requirements.
6. ICBO Report Number 4583.
7. A means of frontside identification and confirmation of meeting Class I (A) interior finish requirements after installation and while in service (without labels).
8. Color and Texture: As selected by the Engineer from manufacture standard options.

B. Moldings: Harmonizing PVC (polyvinyl chloride) moldings.

C. Fasteners: Non-corrosive drive rivets. Provide rivets in matching color to panel. Fasten in pattern recommended in installation instructions.

D. Adhesive: Type recommended by the manufacturer for use with material on the substrate indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine backup surfaces to determine that corners are plumb and straight, surfaces are smooth, uniform, clean and free from foreign matter, nails countersunk, joints and cracks filled flush and smooth with the adjoining surface.
1. Complete finishing operations, including painting, before installing glass-fiber-reinforced panel system components.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. General: Before installation, clean substrate to remove dust, debris, and loose particles.

3.3 INSTALLATION

A. Prefit each panel before fastening and / or adhering in place. All cutting and drilling should be done prior to applying adhesive. Rivet holes should be predrilled using a bit that is 1/8" (3.2mm) larger than the rivet.
1. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.

B. Follow adhesive manufacturer's recommendations for appropriate height of adhesive bead left by trowel. Use a "crosshatch" type pattern. Make sure adhesive extends to all edges of the panel. Adhesive should be applied directly to the back of the frp panel.

C. Start in corner. Install one piece corner molding. Apply silicone sealant in molding. Slide panel into molding and withdraw 1/8" (3.2mm). This will provide the appropriate gap as recommended. Begin in corner nearest molding and with laminate roller begin rolling out towards the edge without the molding.

D. Continue rolling down and out working your way across the panel away from the previously installed panel or initial molding to remove all trapped air.

E. Install fasteners as each panel is being put in place and before next molding is put on. This will help work out any air pockets and help ensure a flat installation. Install fasteners 16" (406.4mm) on center both directions. Space perimeter holes at least 1" to 1-1/2" (25.4mm - 38.1mm) from the panel edge when using 1-piece moldings and stagger holes of abutting panels. When using 2 piece moldings put perimeter holes 1-1/2" to 2" (38.1mm - 50.8mm) away from the panel edge if possible. Remember to overdrill holes 1/8” larger than fastener.

F. Plan ahead so fasteners will not interfere with moldings or other wall fixtures. Do not fasten perimeter of panels until panel has been rolled out. Drill hole into substrate through predrilled holes in panel. Try to center fasteners as much as possible within predrilled hole.

G. Start fastening at edge with installed molding and work toward the other side. Continue installing fasteners one row at a time until fastening is complete. Apply silicone sealant beneath rivet or fastener. Install other molding after fastening is complete.

H. Install one piece division bar and caps or next molding by laying down bead of silicone sealant in molding and sliding onto the panel. Withdraw the molding 1/8" (3.2mm), again to provide proper spacing. The free edge of the molding may be tacked in place if preferred before installing the next panel.

I. Repeat the process working in one direction across the ceiling.

J. Apply silicone sealant in all moldings and around all panel edges, fasteners, and fixtures to provide a moisture proof installation.

K. Factory Mutual Compliance: Panels must always be installed with mechanical fasteners.Insert similar paragraphs for other special applications as required for Project.

3.4 CLEANING

A. Remove any adhesive or excessive sealant from panel face using solvent or cleaner recommended by panel manufacturer.

B. Remove surplus materials, rubbish, and debris, resulting from installation, on completion of work and leave installation areas in neat, clean condition.

END OF SECTION

SECTION 07311 - ASPHALT SHINGLES

PART 1 - GENERAL

A. This Section includes asphalt shingles for steep roofs.

B. Related Sections: The following Sections contain requirements that relate to this Section:
   1. Division 6 Section "Rough Carpentry" for wood sheathing and framing.

1.2 SUBMITTALS

A. Product Data: Provide for each type of product specified, including details of construction relative to materials, dimensions of individual components, profiles, textures, and colors.

B. Samples for Selection: Submit in the form of manufacturer's sample finishes showing the full range of colors and profiles available for each type of asphalt shingle indicated.

1.3 QUALITY ASSURANCE

A. Fire-Test-Response Classification: Where products with a fire-test-response classification are specified, provide asphalt shingles identical to those tested according to ASTM E 108 or UL 790 and listed by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify each bundle of asphalt shingles with appropriate markings indicating fire-test-response classification of applicable testing and inspecting agency.

B. Wind-Resistance-Test Characteristics: Where wind-resistant asphalt shingles are indicated, provide products identical to those tested according to ASTM D 3161 or UL 997 and passed. Identify each bundle of asphalt shingles with appropriate markings of applicable testing and inspecting agency.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's unopened bundles or containers with labels intact.

B. Handle and store materials at Project site to prevent water damage, staining, or other physical damage. Store roll goods on end. Comply with manufacturer's recommendations for job-site storage, handling, and protection.

1.5 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installing asphalt shingles only when existing and forecasted weather conditions will permit work to be performed according to manufacturers' recommendations and warranty requirements, and when substrate is completely dry.

1.6 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Special Warranty: Submit a written warranty signed by manufacturer agreeing to repair or replace asphalt shingles that fail in materials or workmanship within the specified warranty period. Failures include, but are not limited to, deformation or deterioration of asphalt shingles beyond normal weathering.
   1. Warranty Period: Manufactures standard 40 year Lifetime limited warranty after date of Substantial Completion.

1.7 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels clearly describing contents.
   1. Furnish 1 square (9.29 sq. m) coverage of asphalt shingles, identical to those to be installed, in unbroken bundles.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers and Products: Subject to compliance with requirements, manufacturers offering asphalt shingles that may be incorporated in the Work include, but are not limited to, the following:

B. Availbleble Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:
   1. Ridge Vents:
      a. Ridge Filtervent; Air Vent, Inc. (for Class A).
      b. Cobra Ridge Vent; GAF Building Materials Corporation.
      c. Roll Vent; Obdyke: Benjamin Obdyke, Inc.
   2. Waterproof Underlayment:
      a. Bituthene Ice and Water Shield; Grace: W.R. Grace & Co.
      b. CertainTeed "WinterGuard"; ASTM D 1970 sheet barrier of self-adhering rubberized asphalt membrane shingle underlayment having internal reinforcement, and "split" back plastic release film; provide material with warranty equal in duration to that of shingles being applied.

2.2 ASPHALT SHINGLES

A. Colors, Blends, and Patterns: Where manufacturer's standard products are indicated, provide asphalt shingles with the following requirements:
   1. Provide Engineer's selections from manufacturer's full range of colors, textures, and patterns for asphalt shingles of type indicated.

B. Conforming to ASTM D 3018 Type I - Self-Sealing; UL Certification of ASTM D 3462, UL 997 110-mph Wind Resistance, and UL Class A Fire Resistance; glass fiber mat base; ceramically colored/UV resistant mineral surface granules across entire face of shingle; full two-layer laminated four-tab shingle, plus additional random tabs

C. Selections below correspond to types presented in "the NRCA Steep Roofing Manual." Edit and delete types not required.

D. Hip and Ridge Shingles: Job-fabricated units cut from manufacturer's standard cap asphalt shingles.

2.3 METAL TRIM AND FLASHING

A. Refer to Division 7 Section "Sheet Metal Flashing and Trim" for associated flashing.

B. Vent Pipe Flashing: Pipes penetrating shingled roofs shall be ARFCO self-sealing neoprene collar with copper flange.

2.4 ACCESSORIES

A. Waterproof Underlayment: Minimum 40-mil- (1-mm-) thick, self-adhering, polymer-modified, bituminous sheet membrane, complying with ASTM D 1970. Provide primer when recommended by underlayment manufacturer.

B. Ridge Vent: High-density polypropylene, nonwoven modified polyester, or other UV-stabilized plastic designed to be installed under asphalt shingles at ridge.

C. Asphalt Plastic Cement: Nonasbestos fibrated asphalt cement, complying with ASTM D 4586.

D. Nails: Aluminum or hot-dip galvanized steel, 0.120-inch- (3-mm-) diameter barbed shank, sharp-pointed, conventional roofing nails with a minimum 3/8-inch- (9.5-mm-) diameter head and of sufficient length to penetrate 3/4 inch (19 mm) into solid decking or at least 1/8 inch (3 mm) through plywood sheathing.
   1. Where nails are in contact with flashing, prevent galvanic action by providing nails made from the same metal as that of the flashing.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrate for compliance with requirements for substrates, installation tolerances, and other conditions affecting performance of asphalt shingles. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application. Cover knotholes or other minor voids in substrate with sheet metal flashing secured with non-corrosive roofing nails.

B. Coordinate installation with flashings and other adjoining work to ensure proper sequencing. Do not install roofing materials until all vent stacks and other penetrations through roof sheathing have been installed and are securely fastened against movement.

3.3 INSTALLATION

A. General: Comply with manufacturer's instructions and recommendations but not less than those recommended by ARMA's "Residential Asphalt Roofing Manual" or "The NRCA Steep Roofing Manual."

B. Waterproof Underlayment: Apply waterproof underlayment on entire roof area. Cover deck from eaves to at least 24 inches (600 mm) inside exterior wall line.

C. Flashing: Refernce Section 07600 – Flashing and Sheet Metal for requirements.

D. Install asphalt shingles, beginning at roof's lower edge, with an asphalt shingle with tabs removed (do not invert shingle). Fasten asphalt shingles in the desired weather exposure pattern; use 6 fasteners per shingle. Use vertical and horizontal chalk lines to ensure straight coursing.
   1. Cut and fit asphalt shingles at valleys, ridges, and edges to provide maximum weather protection. Provide same weather exposure at ridges as specified for roof. Lap asphalt shingles at ridges to shed water away from direction of prevailing wind.
   2. Use fasteners at ridges of sufficient length to penetrate sheathing as specified.
   3. Pattern: 1/2 shingle spacing offset at succeeding courses.

E. Ridge Vents: Install ridge vents according to manufacturer's instructions.

3.4 ADJUSTING

A. Replace any damaged materials installed under this Section with new materials that meet specified requirements.

END OF SECTION

SECTION 07900 - SEALANTS

PART 1: GENERAL

1.01 WORK INCLUDED

A. Furnish all labor, equipment and materials, and perform all operations necessary to complete all sealant and caulking work in accordance with the drawings and these specifications.

1.02 SUBMITTALS

A. Manufacturers' Descriptive Data: Submit six (6) copies of complete descriptive data for each type of material. Clearly mark data to indicate the type the Contractor intends to provide. Data shall state conformance to specified requirements. Data for sealant and caulking shall include application instructions, shelf life, mixing instructions for multicomponent sealants, and recommended cleaning solvents.

1.03 QUALITY ASSURANCE

A. Applicator: Two years' experience required for sealant applicators.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the job site in the manufacturers' external shipping containers, unopened, with brand names, date of manufacture, color, and material designation clearly marked thereon. Containers of sealant shall be labeled as to type, class, grade, and use. Carefully handle and store all materials to prevent inclusion of foreign materials or subjection to sustained temperatures exceeding 100^{o}F or less than 40^{o}F.

1.05 ENVIRONMENTAL CONDITIONS

A. Apply exterior caulking materials only when temperature exceeds 50^{o}F and when drying weather exists and is predicted by official weather reports for the next 24 hours.

PART 2: PRODUCTS

2.01 MATERIALS

A. Products shall conform to the reference documents listed for each use. Color of sealant and caulking shall match adjacent surface color unless specified otherwise. For ASTM C 920 sealants, use a sealant that has been tested on the type(s) of substrate to which it will be applied.

1. Type 1: General Use Sealant: Sealant material shall be 100% urethane base Sonolastic NP 1 manufactured by Sonneborn, Dynatrol 1 by Pecora or Sikaflex 1A Sika. Colors are to be selected by the Architect/Engineer. Material shall comply with Federal Specification TT-S-00230C, Type II, Class A; ASTM C 920, Type S, Grade NS, Class 25; use NT, M, A.

2. Type 2: General Use Sealant shall be one-part moisture curing, pour grade polyurethane joint sealant system. Colors are to be selected by the Architect/Engineer. Sealant shall comply with Federal Specification TT-S - 230C, Type I, Class A, ASTM C 920-87, Type S, Grade P, Class 25, NP-II as manufactured by Nameco or an approved equal. Non-sag or self-leveling formulation as applicable.

3. Joint Cleaner shall be as recommended by the caulk or sealant manufacturer for the particular application.

4. Joint Primer/Sealer shall be as recommended by the caulk or sealant manufacturer for the particular application.

5. Bond Breakers: Use the type and consistency recommended by the sealant manufacturer for the particular application.

6. Back-up Rod: ASTM C 962, Type A, joint fillers; closed cell neoprene, butyl, polyurethane, vinyl, or polyethylene rod; diameter approximately 1-1/3 times the joint width. Back-up rod material shall be compatible with the sealant.

PART 3: EXECUTION

3.01 SURFACE PREPARATION

A. Surfaces shall be clean, dry, to the touch, and free from frost, moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would tend to destroy or impair adhesion. Where adequate grooves have not been provided, clean out grooves to a depth to the adjoining work. No grinding shall be required on metal surfaces.

1. Steel Surfaces: Remove loose mill scale by sandblasting or, if sandblasting is impractical or would damage finish work, scraping and wire brushing. Remove protective coatings by sandblasting or using a solvent that leaves no residue.

2. Aluminum or Bronze Surfaces: Remove temporary protective coatings from surfaces that will be in contact with sealant. When masking tape is used as a protective coating, remove tape and any residual adhesive just prior to sealant application. Use non-staining solvents recommended by the item manufacturer.

3.02 SEALANT PREPARATION

A. Do not modify the sealant by addition of liquids, solvents or powders. Mix multicomponent elastomeric sealants in accordance with manufacturer's printed instructions.

3.03 APPLICATION

A. Backstops: Where joint cavities are constructed deeper than indicated, tightly pack the back or bottom with backstop material to provide a joint of the depth indicated. Install

backstops dry and free of tears or holes.

B. Primer: Just prior to application of the sealant or caulking compound, clean out all loose particles from joints. Apply primer in accordance with compound manufacturer's directions. Do not apply primer to exposed finish surfaces.

C. Bond Breaker: Provide bond breakers as recommended by the sealant manufacturer for each type of joint and sealant used.

D. Sealant and Caulking Compounds: Use a compound that is compatible with the material to and against which it is applied. Do not use a compound that has exceeded its shelf life or has become too jelled to be discharged in a continuous flow from the gun. Apply the compound in accordance with the manufacturer's printed instructions. Force the compound into joints with sufficient pressure to fill the joints solidly. Compound shall be uniformly smooth and free of wrinkles.

E. Exterior Sealant: Provide sealant at all joints around the perimeter of openings, at all exposed joints on the building, and at all joints indicated to receive sealant.

F. Exterior Masonry Wall Construction Joints: From 6" below finish grade to the top of the wall, joint shall be filled with polyethylene foam backer rod to within 1/2" from the surface. A polyurethane sealant shall be applied over foam backer and filled to become flush with wall. The below grade joint to be filled with asphalt.

G. Exterior Horizontal Granite Entry Panel Joints: Use a 3 part compound which is compatible with the materila to and against which it is to be applied. Apply the compound in accordance with the manufacturer's printed instructions. Force the compound into the joints with sufficient pressure to fill the joint solidly. Provide joint filler material to provide depth surface to which the compound can be applied. Compound finish shall be smooth and free of wrinkles upon final set.

3.04 SEALANT SCHEDULE

SEALANT AND JOINT FILLER LOCATION	1	2	3	4	5
Granite Floor and Wall Panel Joint Sealant (exposed, painted or colored slabs) (areas with foot traffic)		**X**			
All exterior joints around perimeter of opening, all exposed joints of the buildings, and at all joints indicated to receive sealant	**X**	**X**			

3.05 PROTECTION AND CLEANING

A. Protection: Protect areas adjacent to joints from compound smears and migration. Masking tape may be used for this purpose if removed 5 to 10 minutes after the joint is filled. Concrete floor joints shall be taped at edges prior to sealant placement to protect adjacent areas from sealant smears and migration. Tape shall be removed as soon as practical to prevent permanent adhesion to concrete.

B. Cleaning: Immediately scrape off fresh compound that has been smeared on masonry and rub clean with a solvent as recommended by the compound manufacturer. Upon completion of compound application, remove all remaining smears and stains resulting therefrom and leave the work in a clean and neat condition.

3.06 DEFECTIVE WORK

A. All defective work shall be rectified before the building is accepted.

B. The following types of failure will be adjudged defective work: leakage, hardening, crumbling, melting, shrinking, or running of caulking compound or staining of adjacent work.

END OF SECTION

SECTION 09900 - PAINTING

PART 1: GENERAL

1.01 WORK INCLUDED

A. Furnish all labor, equipment and materials, and perform all operations necessary to complete all painting work in accordance with the drawings and specifications to accomplish, but not necessarily limited to the following:

1. Exposed exterior structural metals.

1.02 RELATED WORK

A. Section 05500 - Metal Fabrications

1.03 QUALITY ASSURANCE

A. All materials shall be of first quality of the types listed by the manufacturer. All shall be pure, unadulterated, and delivered to the building in the original unbroken containers, bearing the name, brand number, batch number, and color for identification purposes.

B. All paint and paint colors shall be mixed at the factory or in the plant of a recognized representative. No material shall be changed, thinned, or tinted in any way except as indicated by specified printed instructions of the manufacturer.

C. Coat Designation: Where a primer coat of another painting is called for under other sections of the specifications, it shall not be considered as one of the coats of paint specified in this section.

1.04 SUBMITTALS

A. Colors and Samples:

1. Paint colors shall be as selected by the Architect/Engineer. Furnish 3 complete sets of color cards for selection of colors. The Contractor shall then prepare samples at the job as required until the colors and textures are satisfactory.

2. Before proceeding with painting, Contractor shall, if requested, finish one length of exposed steel of each color scheme required and showing selected colors, finished texture, materials and workmanship. After approval, these sample steel lengths shall serve as a standard for similar work throughout the building.

1.05 DELIVERY, STORAGE AND HANDLING

A. All materials shall be delivered on the premises in the original sealed containers with the seals unbroken and with the name and trade brand of the manufacturer on each container. The manufacturer shall also place on each container a label on which he recommends the thinner to be used with the particular paint, if thinner is necessary.

B. Containers shall be stored inside the building at areas designated by the Contractor, raised above floor level, covered and protected until use. All materials should be stored at 70 degrees F for 24 hours before use.

C. Take precautionary measurements to prevent fire hazards and spontaneous combustions.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Ensure surface temperatures of the surrounding air temperature is above 40 degrees F (5 degrees C) before applying finishes. Minimum application temperatures for latex paints for interior work is 45 degrees F (7 degrees C) and 50 degrees F (10 degrees C) for exterior work. Minimum application temperature for varnish finishes is 65 degrees F (18 degrees C).

B. Provide adequate continuous ventilation and sufficient heating facilities to maintain temperatures above 45 degrees F (7 degrees C) for 24 hours before, during and 48 hours after application of finishes.

C. Provide minimum 25 footcandles of lighting on surfaces to be finished.

1.07 EXTRA MATERIALS

A. All open containers of each type of paint shall be turned over to the Owner upon completion of the project.

1.08 MSD SHEETS

A. Deliver to the owner two (2) copies of MSD sheets for all paint and paint cleaners prior to delivery of paint products.

PART 2: PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Painting materials used in connection with the work of this section shall be equal to the respective paint materials as manufactured by Tnemec, Glidden Paint Co., Pratt and Lambert Co., Sherwin-Williams, Benjamin Moore, Devoe or approved equal.

2.02 MATERIALS

A. Exterior:

1. All exposed iron, steel and other ferrous metals including roof fan housing, ventilators, vent stacks, louvers, exposed faces of lintels, shelf angles, columns and beams:

First Coat: Tnemec-Series 37-77 Chem Prime
One Coat: Tnemec-Series 66 Hi-Build Epoxoline, 3-4 mils dry
One Coat: Tnemec-Series 73 Endura-Shield, 2-3 mils dry

2. All wood trim, soffits, cornices, fascias, frieze boards and window trim and cedar shingles shall be given:

   Two Coats: SW Woodscapes House Stain Exterior solid Color A15 Series
   Color: Baja Beige

A. Concrete Floor:

1. One Coat: Sherwin Williams ArmorSeal33 Epoxy Primer/Sealer @ 8.0 mils dft.
2. Two coats: Sherwin Williams ArmorSeal 1000 HS @ 3.0 – 5.0 mils dft/ct (with anti-slip aggregate)

PART 3: EXECUTION

3.01 INSPECTION

A. Installer must examine the areas and conditions under which the work is to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work.

B. All surfaces to receive painter's finish shall be properly prepared to receive the finish. Surfaces shall be dry, free from organic matter, dirt, cement, grease, oil, loose paint, scale, scratches, finger marks, pencil marks, etc.

C. Do not proceed with the work until unsatisfactory conditions have been corrected. The starting of work shall indicate an acceptance of those areas and conditions by the installer.

3.02 PREPARATION

A. Before painting, remove hardware, accessories, plates, lighting fixtures and similar items or provide ample protection for such items. Upon completion of each space, replace above items.

B. Remove all dust, dirt, plaster dust, grease, and other extraneous matter which would affect the finished work.

C. Ferrous surfaces shall be cleaned of dirt and grease, using suitable solvents. Rust and defective paint shall be removed down to base metal and such spots retouched with primer.

D. All spaces shall be broom-cleaned before painting is started, and all surfaces to be painted shall be dry.

3.03 APPLICATION OF FINISH

A. All work shall be done in a workmanlike manner and by skilled mechanics. All materials shall be applied evenly, flow-on smoothly, free from brush marks, hairs, runs, or sags and shall be rubbed down between coats.

B. No paint or enamel shall be applied until the preceding coat is thoroughly dry and hard.

C. All materials shall be applied in accordance with the manufacturer's instructions.

D. All work adjacent to surfaces to be painted shall be adequately protected by drop cloths or other approved means. All hardware and accessories shall be removed, if necessary, to allow the bottom edges to be painted. On completion of the painting, all items removed shall be replaced. The removal and replacement of all items shall be carried out only by skilled mechanics. Include removal of hardware, escutcheons, lighting fixtures, and other items subject to damage.

E. Any damage caused by paint or painting operations shall be rectified by this Subcontractor and all touching up necessary shall be performed.

F. Generally, the workmanship and the method of carrying out the work shall be in accordance with the "Paint Manual" B.M.S. 105 issued by the National Bureau of Standards.

G. Any material introduced on the job which requires painting or finishing shall be painted or finished as part of this contract.

H. Number of coats herein specified is the minimum required. If, in the opinion of the Architect/Engineer, surfaces do not conform to the approved samples, additional coats shall be applied.

3.04 CLEANING

A. Touch up and restore finish where damaged. Remove all paint spots from walls, glass and other surfaces. Leave work in clean, orderly and acceptable condition.

3.05 COLOR SCHEDULE

A. At the completion of his work, the Painting Contractor is to supply to both the Owner and the Architect/Engineer a color schedule of the painting materials actually used. This schedule may differ from the one originally issued by the Architect/Engineer and is, therefore, needed for future reference.

END OF SECTION